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# Commercial Refrigeration

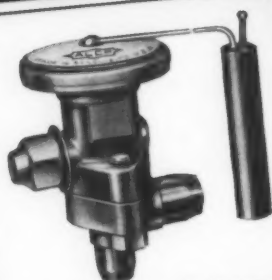
AND AIR CONDITIONING



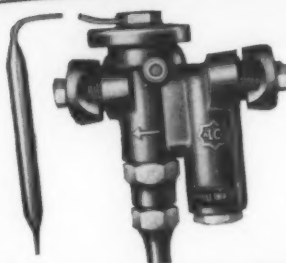
MERCHANDISING, SELLING, INSTALLATION AND MAINTENANCE OF  
COMMERCIAL REFRIGERATION AND AIR CONDITIONING EQUIPMENT

THE NEW YORK  
PUBLIC LIBRARY  
612641B  
ASTOR, LENOX AND  
TILDEN FOUNDATIONS  
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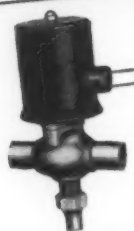
# ALCO'S 25<sup>th</sup> ANNIVERSARY



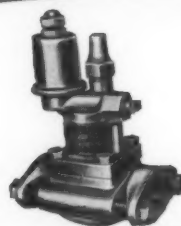
Expansion valve, 1/4-50 tons



Ammonia expansion valve, 1-100 tons



Solenoid, all refrigerants



EPR valves, all refrigerants

*Our family has grown to more than 6,000 refrigerant controls.*

ALCO has the right answer to every refrigerant control problem.

Write for detailed information on your intended use.

**ALCO has refrigeration under control!**

Designers and Manufacturers  
of Thermostatic Expansion  
Valves; Evaporator Pressure  
Regulators; Solenoid Valves;  
Float Valves; Float Switches.

SEE YOUR ALCO WHOLESALER



## ALCO VALVE CO.

843 KINGSLAND AVE. • ST. LOUIS 5, MO.

# NEW pocket-sized, split-core volt-ammeter

1/2 the usual size: only 7"

1/3 the usual weight: only 14 oz.

1/2 the usual price: only \$42<sup>75</sup>

MEASURES CURRENT instantly, safely, accurately

WITHOUT INTERRUPTING CIRCUIT

**AMPROBE**



Here, at last, is a split-core Volt-Ammeter small enough, light enough to slip into your pocket. And so low in price, it can be owned by every maintenance man, engineer, electrician, motor repair and service man. To use the Amprobe, just press the trigger to open the spring-controlled probe jaws; then release the trigger to close probe jaws around conductor. That's all you do to measure the current instantly, safely, accurately — without interrupting the circuit. A beautifully designed, precision-made instrument which can be subjected to rough handling without fear of breakage. Order the new Amprobe from your nearest distributor today! For descriptive literature, write Dept. \_\_\_\_\_, Pyramid Instrument Company, 49 Howard Street, New York 13, N. Y.

## AMPROBE SPECIFICATIONS:

model A-5      model A-5-1      model A-6

amperes: 0/6.5/13/36/65/130 amps.    amperes: 0/6.5/13/36/65/130 amps.    amperes: 0/10/25/50/100/250 amps.

volts: 0/130/260 V. A.C.    volts: 0/150/600 V. A.C.    volts: 0/150/600 V. A.C.

frequency: 50-70 cycles • Accuracy  $\pm 3\%$  (at full scale deflection)  
voltage breakdown test: 3,000 volts A.C. • Scale length: 2.47 inches

Complete with plug-in type voltage test leads and genuine top grain cowhide leather case.



## PYRAMID QUALITY INSTRUMENTS

ORDER AMPROBES FROM THESE DISTRIBUTORS FOR IMMEDIATE DELIVERY:

MG ELECTRICAL EQUIPMENT CO.  
Birmingham, Alabama

TUSCON ELECTRICAL SUPPLY  
Tucson, Arizona

H. G. RISING  
Los Angeles, California  
INSULATION & WIRES, INC.  
San Francisco, California

TRI-STATE SUPPLY CORP.  
Los Angeles, California

TRI-STATE SUPPLY CORP.  
San Francisco, California

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FALMER'S ELECTRIC MOTOR REPAIR  
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COMPLETE READING ELEC. CO.  
Chicago, Illinois

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East St. Louis, Illinois

CRESCENT ELEC. SUPPLY CO.  
Louisville, Kentucky

ACME REFRIGERATION SUPPLY, INC.  
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ARVEDON ELECTRIC SUPPLY  
Boston, Massachusetts

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FITZPATRICK ELEC. SUPPLY CO.  
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NORTHLAND ELECTRIC SUPPLY CO.  
Minneapolis, Minnesota

CABELL ELECTRIC COMPANY  
Jackson, Mississippi

BUTLER ELECTRIC CO., INC.  
St. Louis, Missouri

BUTLER ELECTRIC COMPANY  
Herrin, Illinois

CONTINENTAL ELECTRIC CO.  
Kansas City, Missouri

GLASCO ELECTRIC CO.  
Kansas City, Missouri

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TINEY'S ELECTRIC CO.  
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RELIABLE ELECTRIC SUPPLY  
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WALLWORK BROTHERS, INC.  
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ELECTRIC SUPPLY COMPANY  
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BROWNELL DISTRIBUTORS, INC.  
Atlanta, Georgia

HENZEL-POWERS INC.  
Albany, New York

MILL POWER SUPPLY  
Charlotte, North Carolina

DAKOTA ELECTRIC SUPPLY CO.  
Fargo — Minot — Bismarck — Grand Forks — Aberdeen

HUGHES PETERS, INC.  
Cincinnati, Ohio

HUGHES PETERS, INC.  
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H. LEFF ELECTRIC CO.  
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JONES-NEWBY SUPPLY CO., INC.  
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BRUCE ELECTRIC SUPPLY CO., INC.  
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Fort Worth, Texas

ATLANTIC ELECTRIC CORP.  
Norfolk, Virginia

TRI-STATE SUPPLY CORP.  
Seattle, Washington

MANNING EQUIPMENT, LTD.  
Halifax, Canada

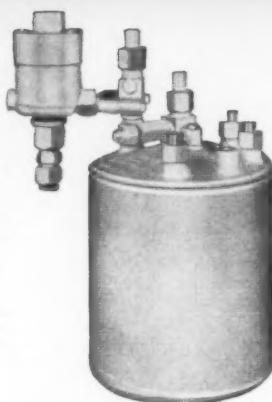
# TEMPRITE

INSTANTANEOUS...

WATER COOLERS  
BEVERAGE COOLERS  
CARBONATORS  
ACCESSORIES

## WATER & BEVERAGE COOLERS

Compact Temprite water coolers operate on patented *instantaneous cooling principle*. There's a Temprite model for the smallest to the largest commercial or industrial application. *Adaptable for use with carbonated beverages and many other special liquids*. Constructed entirely of non-corrosive materials.



## BEER COOLERS

Actually cool up to 3 kinds of beer plus carbonated water and plain water in the same cooler at the same time. Patented control maintains perfect drinking temperature under heaviest loads and protects against needless draught beer waste. All stainless steel coils are easy to keep clean and high tensile strength offers safety and permanency.

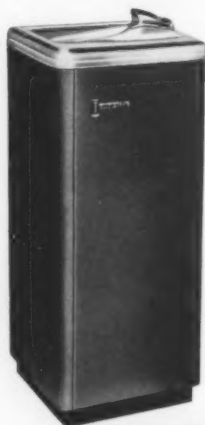
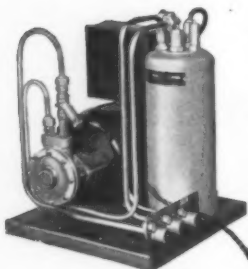


SELF-CONTAINED

## CARBONATORS

Temprite Carbonators and combination Cooler-carbonators will deliver as many as 5620 glasses of highly carbonated water from a single tank of CO<sub>2</sub> gas.

A Temprite will cool, carbonate and dispense either plain or carbonated water at the rate of 300 glasses per hour at a constant 40 deg. temperature. No loss of CO<sub>2</sub> gas through purges or vents. Gives peak carbonation at lowest CO<sub>2</sub> gas pressure.

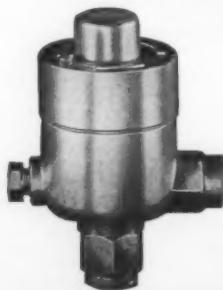


## WATER COOLERS

1. Available in pressure or bottle type models for a wide variety of applications.
2. Stainless steel top offers beauty, durability and sparkling cleanliness. Bubbler design provides positive sanitary protection.
3. Water flow control does away with spurting or splashing.
4. Optional foot pedal attachment.
5. Stainless steel cooler and tank.
6. Hermetic or open type condensing unit. Cooler for odd frequencies or voltages may be secured.
7. 5-year warranty protection.

## INDUSTRIAL LIQUID COOLERS

Provide instantaneous liquid cooling for industrial applications with high capacity requirements. Used in bottling plants, bakeries, and for air conditioning, industrial and process cooling. Accurate temperature control. Approved by Underwriters.



## OIL SEPARATORS

From 1/6th h.p. to 50 tons for all types of commercial refrigerating applications. Keeps oil in compressor, away from condenser and evaporator coils. Can increase heat transfer up to 20%.

## 2-TEMP VALVES

Provide a wide range of adjustments and close temperature control. Rugged construction. Low pressure drop. 5 models in capacities up to 250,000 B.T.U.



Also made by Temprite . . . EQUALIZER TANKS, ADAPTOR BLOCKS, HEAT EXCHANGERS, and STORAGE COOLERS

# TEMPRITE PRODUCTS CORP.

ORIGINATORS OF INSTANTANEOUS LIQUID COOLING DEVICES

41 PIQUETTE AVENUE  
DETROIT 2, MICHIGAN





# Commercial Refrigeration

AND AIR CONDITIONING



**THE COVER . . .** A silver stream of quarters is pouring into the coffers of commercial refrigeration dealers all over the country who are selling equipment on the coin-meter plan. Here a collector for one such dealer counts and packages the coins which the customer has deposited to pay for his equipment. For a complete story of how one West Coast dealer uses this plan to good advantage, turn to page 40.

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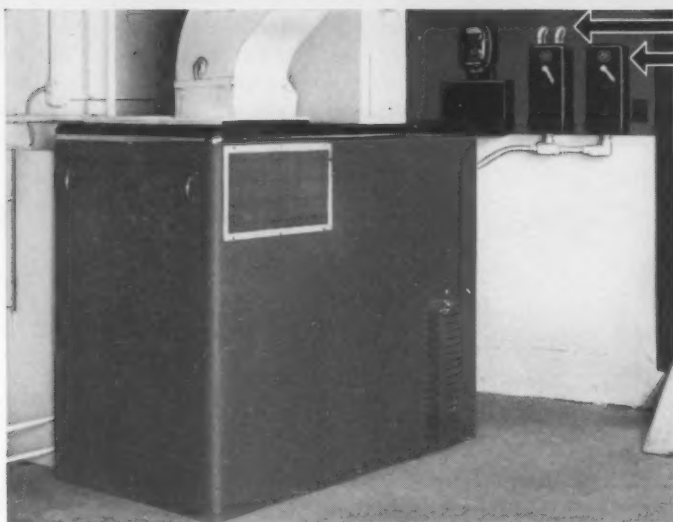
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An office heating installation, using a Chrysler Airtemp automatic gas heating unit, combined with an installation of two Allen-Bradley Bulletin 712, Size 1, Form 2F combination starters and two Allen-Bradley Bulletin 800, Type R4SA push buttons.

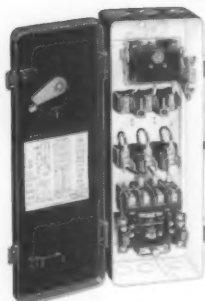
**Airtemp**

## AIR-CONDITIONERS

*equipped with*



## Trouble Free Motor Controls



Bulletin 712, Size 1, Form 2F, fused disconnect switch combination starter in a NEMA Type 1 general purpose enclosure. Note the generous wiring room and many knockouts.

**WHY ARE ALLEN-BRADLEY STARTERS SO POPULAR** for air-conditioning service? . . . Because they are trouble free. Only one moving part. No pivots, pins, or bearings to corrode or stick . . . no jumpers to break. You install them . . . and forget them!

**NO CONTACT MAINTENANCE.** Allen-Bradley patented silver alloy contacts never need cleaning, filing, or dressing.

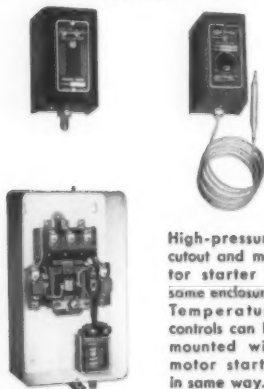
**DEPENDABLE OVERLOAD RELAYS.** Allen-Bradley thermal relays are accurate and dependable even after long service.

The A-B trademark stands for millions of trouble free operations.

Allen-Bradley Co., 1340 S. Second St., Milwaukee 4, Wisconsin

### ALLEN-BRADLEY AIR-CONDITIONING AND REFRIGERATION CONTROLS

**PRESSURE AND TEMPERATURE CONTROLS**

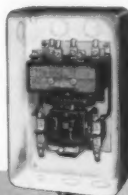


High-pressure cutout and motor starter in same enclosure. Temperature controls can be mounted with motor starter in same way.

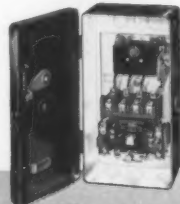
**MANUAL STARTER**



**AUTOMATIC STARTER**



**COMBINATION STARTER**



**HEAVY COMPRESSION STARTER**



# ALLEN-BRADLEY

## SOLENOID MOTOR CONTROL

QUALITY



MODEL 306. The sensational open case with THREE refrigerated shelves. For profitable impulse sales.



MODEL 6710. 10-ft. long open front case with extra wide display shelf. Ideal for produce display.



MODEL 5710. Open Front self-service case for pre-packaged fresh meats, produce, or dairy products.



SERIES 100. Double duty models 6 to 12 ft. long. Also top display models in 10 and 12 ft. lengths.

## NEW KOCH SELF-SERVICE CABINET PUTS **FROZEN FOOD** **PROFITS** WITHIN **EASY REACH**



YOU'LL NEVER KNOW how long frozen foods will keep in this new Koch self-service cabinet. Customers just won't leave them there long enough for you to find out! That's because frozen foods are UP where folks can see and reach for them . . . yet cold stays DOWN where it belongs for maximum operating efficiency. The amazing new 3-way cooling principle confines cold to the foods on display . . . even keeps ice cream frozen hard.

THE SENSATIONAL MODEL 1407 is superbly designed. It will stand out, even in a brilliantly lighted store . . . to attract and handle more buyers . . . invite more impulse purchases. Get the facts on this new Koch Frozen Food Case today!

SEE FOR YOURSELF HOW IT LOOKS . . . HOW IT WORKS . . . HOW IT SELLS!

# KOCH

## REFRIGERATORS

SINCE 1883

NORTH KANSAS CITY 16, MO.

Write for complete information  
and available territories



MODEL 3508. Wall Type Display Case. For self-service display of dairy products or beverages.



MODEL 3865. A 65-cu. ft reach-in refrigerator. One of the six popular Koch reach-in cabinets.

KOCH REFRIGERATORS  
North Kansas City 16, Mo.

CRI

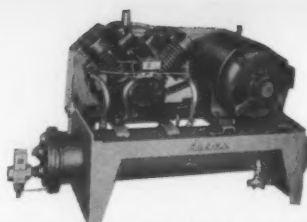
Please send me at once, without obligation, complete information on profit-making Koch Display Cases and Refrigerators.

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ ZONE \_\_\_\_\_ STATE \_\_\_\_\_

SEE THIS FAMOUS LINE IN DALLAS  
IN JANUARY • BOOTH No. 307

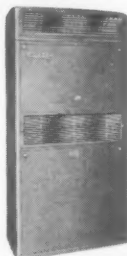


WATER-COOLED CONDENSING UNITS—Shell and Tube Type

You can  
increase  
your profits  
because you can  
**handle any**

**AIR CONDITIONING • REFRIGERATION • OR AIR MOVING JOB**

with  
**Curtis**  
equipment



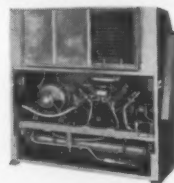
Nationally Advertised  
in Saturday Evening Post,  
Time and Newsweek

PACKAGED TYPE AIR CONDITIONERS — 2½-8 Ton

The New Curtis line reflects the many advantages gained from almost a century of accumulated experience in engineering, designing and manufacturing. You can install Curtis equipment with the knowledge beforehand that it will operate dependably with the highest degree of efficiency and quietness. Your customer will be happy, your reputation enhanced, your profits greater. Write for complete detailed information about a Curtis franchise.



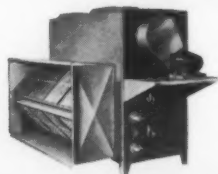
EVAPORATIVE CONDENSERS and COOLING TOWERS



CENTRAL TYPE AIR CONDITIONERS—10 and 15 Ton

**CURTIS REFRIGERATING MACHINE DIVISION**

of CURTIS MANUFACTURING COMPANY  
1915 Kienlen Avenue, St. Louis 20, Mo.



CEILING and FLOOR TYPE AIR HANDLING UNITS

RT-49-17



*More and More...Engineers Agree*  
 that It's not **HOW MUCH** moisture  
 you remove from a refrigeration system  
 that counts...

...It's **HOW LITTLE** moisture  
 is left!



That is why they install a  
**SPORLAN CATCH-ALL**  
 when they really want to dry  
 a system.

They know that the Catch-All is the  
 Perfect Filter-Drier because it dries  
 down to a Low End Point... a point  
 So Low that any remaining  
 moisture is  
 absolutely harmless!

why is the  
**SPORLAN**

*Catch-All*

**THE PERFECT FILTER-DRIER?**

**because**

Its unique, porous cylinder is made up of  
 minute particles of a highly efficient desiccant,  
 whose efficiency is greater than that of the same  
 desiccant in granular form.

**because**

After being completely assembled, it is  
 activated to a high degree of dryness and immedi-  
 ately sealed with moisture proof seals to prevent  
 any moisture from entering before installation.

**because**

It cannot powder!

**because**

It cannot pack!

**because**

The refrigerant cannot channel!

**because**

Being scientifically molded to provide progres-  
 sive filtering it filters any foreign matter as minute  
 as 9 microns with negligible pressure drop.

Having a molded, porous cylinder, the Catch-  
 All is inherently free from powdering, packing,  
 and channeling. Designed scientifically to give  
 maximum contact of refrigerant and desiccant, the  
 Catch-All is a perfect filter and a perfect drier.

When you want clean Bone-Dry refrigeration systems...  
 install Sporlan Catch-Alls and get Peak Performance on all installations

**SPORLAN VALVE COMPANY**



7525 SUSSEX AVE. • ST. LOUIS 17, MISSOURI

THE CATCH-ALL IS OBTAINABLE AT ALL SPORLAN WHOLESALE

# Simple, Positive, Low Cost, Enduring RELIEF PROTECTION WITHOUT LEAKAGE

THE GREAT NEW

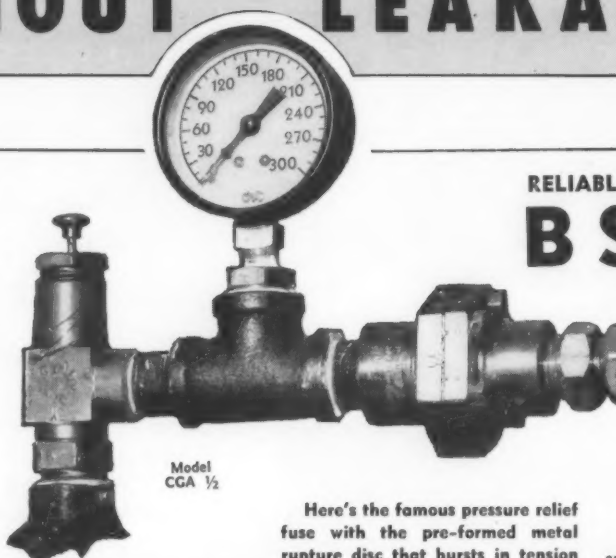
## BS & B REFRIGERANT RELIEF VALVE



### MANUFACTURERS, JOBBER . . .

Add safety to your product, boost your sales. Attractive discounts offered for larger quantity purchases. Write, wire today.

**BS & B**  
REFRIGERANT  
RELIEF VALVE



Model  
CGA 1/2

Handles pressure rises with ease . . . re-sets tightly to prevent loss. This new valve has been proved tight in excess of 200 blow-downs!

Approved by City of Chicago Refrigeration Inspection Department for installation in that city with or without SAFETY HEAD. Even greater protection against possible leakage caused by foreign particles in the system is given by installing a SAFETY HEAD on the outlet connection (see ASME Unfired Pressure Vessel Code, para U10-b).

BS&B's large production facilities insure volume production. It is an ideal relief valve for medium and large installations. Send coupon for details.

RELIABLE, REMARKABLE

## BS & B SAFETY HEADS

Here's the famous pressure relief fuse with the pre-formed metal rupture disc that bursts in tension at predetermined pressure. Acts instantly. Provides a full-throated, pipe-size, unrestricted relief opening. Tens of thousands in use the world over.

For refrigeration systems, two types of SAFETY HEADS are ideal. The Midget is a low-priced "throw-away" unit with rupture member installed. Use as a coupling after disc has burst.

The Baby has renewable disc. Replacement accomplished easily, quickly.

Both are available in several sizes, designed for various pressures. Send coupon today for complete facts.



SEALED  
MIDGET



BOLTED  
BABY

Special Products Division, Section FV-11  
BLACK, SIVALLS & BRYSON, INC.  
Power and Light Building, Kansas City 6, Mo.

☐ Send complete literature concerning BS&B Refrigerant Relief Valve ☐ Send full information about BS&B SAFETY HEADS ☐ Please have Sales Engineer call ☐ Send quantity discount information. We are ☐ Jobber ☐ Distributor ☐ Equip. Mfr. ☐ Supply Company.

NAME \_\_\_\_\_

FIRM \_\_\_\_\_

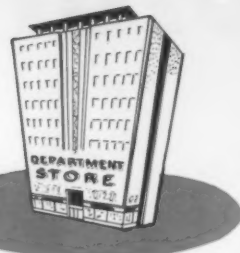
STREET \_\_\_\_\_

CITY \_\_\_\_\_ ZONE \_\_\_\_\_ STATE \_\_\_\_\_

**BRUNNER**  
SINCE 1906

**REFRIGERATION** helps you serve better

**Don't let  
the size  
of the job  
stop you!**



Take on Brunner! Take on new business! With Brunner you have a line that sells—something to work with.

✓ 40 sizes and types of refrigeration condensing units ranging from close-coupled air-cooled 1/4 hp units to husky 75 hp units for the big commercial jobs.

✓ Specify and install with absolute confidence. Brunner's are completely Brunner built... known and accepted in every trade and industry as the soundest constructed units money can buy.

✓ Dependable supply in any size, type or quantity. Brunner facilities have more than *doubled since the war* and still building.

✓ Co-operation...both sales and engineering... is yours from a nationwide field organization staffed by men with years of practical, on-the-job experience. These men know your problems and talk your language.

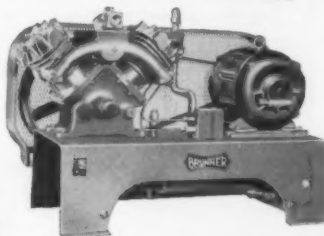
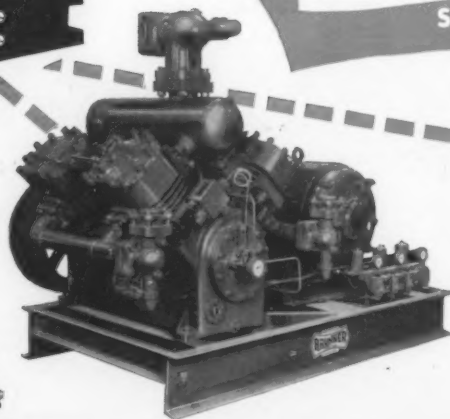
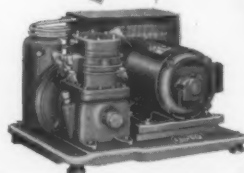
**BRUNNER MANUFACTURING CO.**  
Utica 1, N. Y., U. S. A.

✓ **PROFIT MARGINS**, markets and technical details are best covered in meeting with a Brunner factory representative. Spend a little time with him. See what Brunner can contribute to your better business. When do you want to see him?

**REFRIGERATION  
CONDENSING UNITS**

...a size and type  
for every purpose

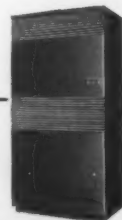
**AIR AND WATER  
COOLED MODELS**  
1/4 HP. to 75 HP.



**BRUNNER**  
SINCE 1906

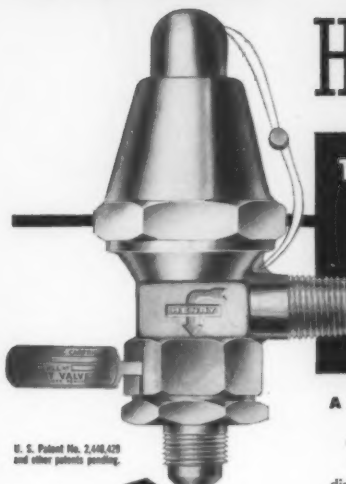
**AIR CONDITIONING**

Self Contained Units in 4 sizes: 3 - 5 - 7½ and 10 HP.  
Remote Installation Types from 5 to 75 HP.



# STOP Your Freon Losses

**HENRY** NOW GIVES YOU COMPLETE RELIEF DEVICE PROTECTION ON ANY SIZE REFRIGERATION OR AIR CONDITIONING UNIT



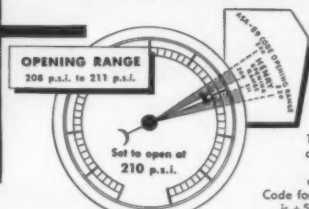
## TYPE 545 *Super* DIAPHRAGM RELIEF VALVE With Built-in Replaceable Rupture Disc Cartridge in Outlet Port

A replaceable rupture disc cartridge is built into the outlet port of the valve and provides additional protection against loss of freon.

This valve design permits locating and sealing the rupture disc directly in the outlet port, since any pressure built up between valve seat and rupture disc, due to momentary over-pressure, will aid rather than retard opening of the valve. Furthermore, the rupture disc can be replaced without removal of the valve.

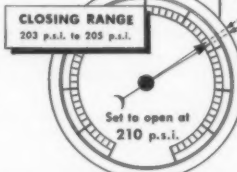
The use of this valve meets the requirements of paragraph U-10(b) of the A.S.M.E. Unfired Pressure Vessels Code which permits the use of a rupture disc at the outlet port of a relief valve.

### PERFORMANCE of Type 545 Super Relief Valve Under Freon Service



The amount of deviation from set pressure under ASA-B9 Code for Relief Valves is  $\pm 5\%$ . The Henry Deviation of only  $1\frac{1}{2}\%$  has set a new standard for performance in the refrigeration and air conditioning industry due to its diaphragm type of construction and controlled cushioned seating.

MAXIMUM DEVIATION FROM SET PRESSURE ONLY  $1\frac{1}{2}\%$



MAXIMUM DEVIATION FROM SET PRESSURE  $3.3\frac{1}{2}\%$

U. S. Patent No. 2,640,429 and other patents pending.



### THE HENRY REPLACEABLE RUPTURE DISC CARTRIDGE

For Type 545 Diaphragm Relief Valve and Type 553 "Sentry" Over-pressure Unloader

The fragile rupture disc is fully sealed and protected—reducing possibility of damage to a minimum. Replaceable rupture disc cartridge can be easily installed without removal of valve from the line. Available in all standard relief pressures from your jobber at nominal cost.

## HENRY "SENTRY" OVER-PRESSURE UNLOADERS

### REPLACEABLE CARTRIDGE TYPE



Type 553 with Replaceable Rupture Disc Cartridge

This is not a "throw-away" type but can be reserviced merely by replacement with a new rupture disc cartridge.

### "THROW-AWAY" TYPE



Type 551  
A RUPTURE PLUG WITH VENT TO ROOM ATMOSPHERE



Type 552  
A RUPTURE PLUG WITH FLARE OUTLET CONNECTION FOR VENTING TO OUTSIDE ATMOSPHERE

Types 551 and 552 Over-pressure Unloaders are "throw-away" types since they can not be reserviced after rupture. They are primarily designed for use on small units. These over-pressure unloaders are recommended for use instead of fusible plugs because of their greater dependability.

Write FOR BULLETINS AND ENGINEERING DATA

SOLD BY LEADING JOBBERS

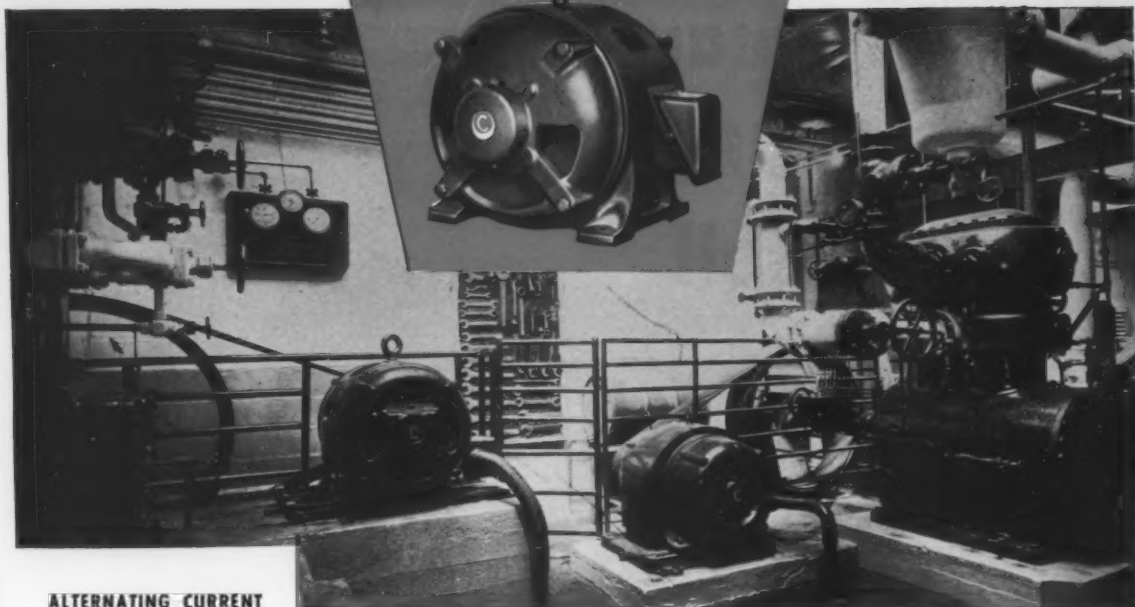
## HENRY VALVE COMPANY

MELROSE PARK, ILLINOIS (Chicago Suburb) • Cable: HEVALCO, MELROSE PARK, ILLINOIS



VALVES, DRIERS, STRAINERS, CONTROL DEVICES, ACCESSORIES FOR REFRIGERATION, AIR CONDITIONING, INDUSTRIAL APPLICATIONS





## ALTERNATING CURRENT MOTORS

### POLYPHASE

Squirrel Cage Induction —  
1/8 to 400 H.P.  
Wound Rotor Motors —  
1 to 350 H.P.  
Synchronous Motors —  
20 to 150 H.P.

### SINGLE PHASE

Split Phase Induction —  
1/8, 1/4, 1/2 H.P.  
Capacitor — 1/8 to 20 H.P.  
Repulsion Start, Brush Lifting,  
Induction — 1/2 to 15 H.P.

### DIRECT CURRENT MOTORS

1/8 to 300 H.P.

### GENERATORS

AC, 500 Watts to 300 KVA  
DC, 250 Watts to 200 KW

### MOTOR GENERATOR SETS

AC to DC, AC to AC  
DC to DC, DC to AC

*Open Protected, Splash Proof,  
Totally Enclosed Fan Cooled,  
Explosion Proof*

Ball Bearing motors are factory lubricated for several years' normal service. Bearing housing construction permits easy re-lubrication when unusual service demands it.

Century 100 horsepower and 125 horsepower type SCH motors driving refrigeration compressors. Also in this room are 3 Century 75 horsepower motors which have been operating more than 15 years without a shutdown.

## For Operating Your Refrigeration Compressors

SPECIFY *Century* TYPE SCH MOTORS

**with HIGH STARTING TORQUE  
and LOW STARTING CURRENT**

Century type SCH, squirrel cage motors are the ideal power supply for refrigeration compressors because they have the ability to start heavy loads with low starting current.

This means that it is never necessary to over-motor the compressor to get the starting torque needed. In fact, compared to a general purpose motor, it is often possible to substitute a Century type SCH high starting torque motor of the next lower horsepower rating.

In addition, Century motors are known for their ability to operate smoothly and quietly throughout their long service life. They are built in a wide range of types, in sizes from 1/8 to 400 horsepower for every refrigeration, air conditioning and air circulating requirement.

*Popular types of standard ratings are generally available from factory and branch office stocks.*

### CENTURY ELECTRIC COMPANY

1806 Pine Street, St. Louis 3, Missouri  
Offices and Stock Points in Principal Cities

SPECIFY



for all your electric power requirements

# Why Lipman is a PROFITABLE LINE to sell

**ESTABLISHED ACCEPTANCE** — Lipman has been well known for 30 years.

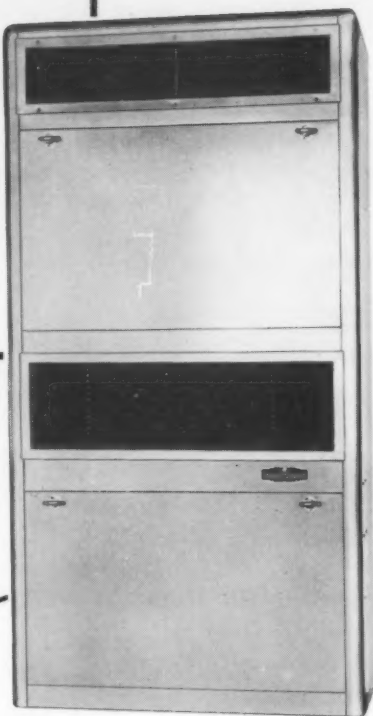
**TWO COMPLETE LINES** — Lipman refrigeration machines available in  $\frac{1}{4}$  thru 40 hp. — air and water cooled — with ammonia, Freon-12 and methyl chloride refrigerants. The air conditioning line includes self-contained and remote units for commercial uses.

**WELL ENGINEERED**, units are moderate speed, heavy duty, rugged — perform well, stand up in service.

**PROMPT DELIVERY** possible on most units.

**SALES HELPS** consist of national advertising — useful sales literature — newspaper ads you can use to fit your needs—engineering service to help you . . . *real cooperation right down the line!*

*Get complete information on handling the profitable Lipman line — call, wire or write today.*



Lipman Packaged Air Conditioner, available in 3, 5 and 7½ h.p. sizes.



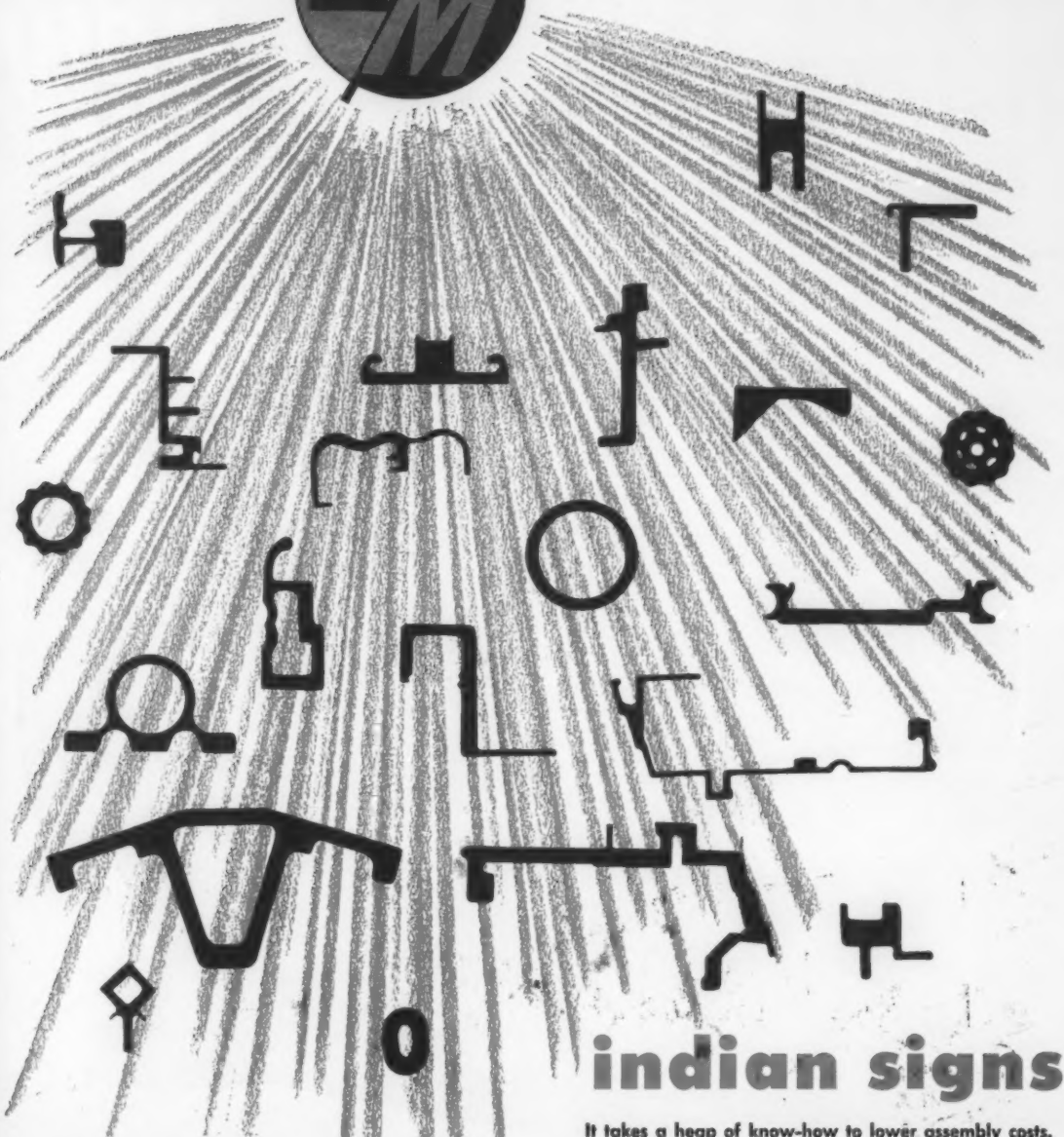
Lipman 1½ hp. air-cooled Methyl Chloride or Freon-12 Condensing Unit.

## GENERAL REFRIGERATION

DIVISION

YATES-AMERICAN MACHINE CO. Beloit, Wisconsin





Typical aluminum and brass extrusions illustrated were produced in our modern plants.

## indian signs

It takes a heap of know-how to lower assembly costs. Let our engineers show you how aluminum and brass extrusions can take the Indian sign off your production problems. Send parts or blue prints for quotation.

EXTRUDED METALS DIVISION  
**DETROIT GASKET & MANUFACTURING COMPANY**  
DETROIT 23, MICHIGAN

# a new



754-1



# Single-phase motor

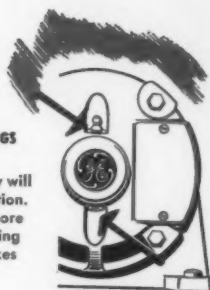
...PACKED WITH *eye appeal*

These 4 wanted features in a complete line from 1 to 5 hp.

Meet the newest member of the famous Tri-Clad® motor family—G.E.'s new single-phase capacitor motor! Whether you sell it by itself or build it into your machines, you'll find it's got more operating "pluses", more sales-worthy features including freedom from radio or television interference. But see for yourself! Arrange with your nearest G-E office to inspect this new G-E motor now. For complete data, write for Bulletin GEA-5401. Apparatus Department, General Electric Company, Schenectady 5, N. Y.

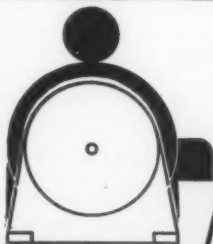
## NEW! LONG-LIFE BEARINGS easy to re-lubricate!

Bearings greased at the factory will run for years without re-lubrication. But, if they should need more grease, a pressure-relief greasing system with convenient fittings makes them easy to lubricate.



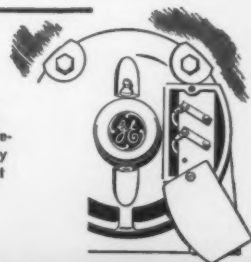
## NEW! LIGHTER, MORE COMPACT to save space, shipping costs!

This new Type KCS motor has no capacitor on top, no conduit box on the side to increase over-all dimensions. It's not only more compact but 15 to 20 per cent lighter, too, depending on rating.



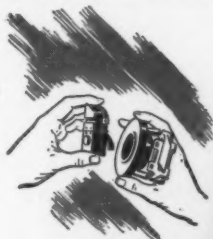
## NEW! A TERMINAL BOARD to make installation easy!

It's easy to hook up this motor. Remove a plate and there's an easily accessible terminal board built right into the endshield.



## NEW! A TRANSFER MECHANISM to make starting a snap!

Smooth reliable starting is assured by a simplified totally enclosed centrifugal mechanism and transfer switch. No rods or pins on the centrifugal mechanism to wear or get out of order!



REG. U.S. PAT. OFF.

**SINGLE-PHASE  
CAPACITOR MOTOR**

# HOW "Double" Talk CAN DOUBLE YOUR V-BELT BUSINESS



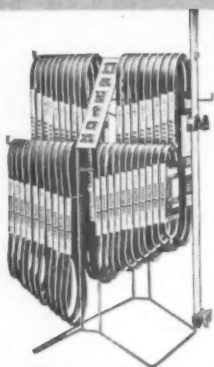
## New Dayton "take-home-a-spare" sales plan, sells 2 instead of 1, improves your service

Dayton dealers double their V-Belt business on store sales or home service calls by asking: "Your car carries a spare—why not your home machines and appliances? That way, you'll always have the correct *kind* and *size* belt on hand for emergency installation."

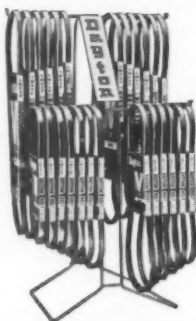
Belt sales double when most customers say: "O.K.—I'll take a spare, too." And, because you sold the spare, you have first call when it's time to install it.

Effective selling tools implement this "twin-sale" program. Salesmaker assortments give you fast selling belt selections with no "fat" in them, no odd, slow-moving sizes. Sales training and other helps available.

Dayton has the only Fractional Horsepower V-Belt made with electronically processed cord fabric—you can guarantee it for top quality and performance. And you can increase your sales and profits, while rendering your customers a real service, with the Dayton "take-home-a-spare" plan, the outstanding sales plan in the V-Belt field. Write: *Dayton Rubber Company, Dayton, Ohio.*



**SENIOR SALESMAKER** stocks the 39 fastest-selling V-Belts for home and farm machines and appliances, even small industrial applications.



**JUNIOR SALESMAKER** stocks the 25 fastest-selling V-Belts for home and farm machines—refrigerators, washing machines, pumps, fans, etc.



**WALL AND WINDOW POSTERS** remind your customers that you are V-Belt headquarters, remind them to "Be prepared—take home a spare!"



**MATCHOMETER** stick makes it easy to match the old belt with a new one of exactly the right size.



**INSTRUCTION FOLDERS** offer tested display and selling suggestions.



**CATALOG No. 44** and belt size cards simplify replacement of V-Belts on all machines.

# Dayton Rubber

THE MARK OF TECHNICAL EXCELLENCE  
IN NATURAL AND SYNTHETIC RUBBER



**NO RESISTANCE TO BENDING...**

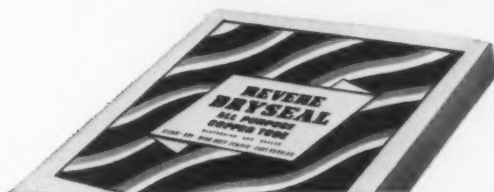
just like **DRYSEAL** refrigeration tube

This tube can be bent by hand with little effort. And because of its ductility and soft temper, Dryseal Tube will not split on the ends when flared for compression fittings.

Another important Dryseal feature is the absence of moisture. This tube is bone-dry inside from one end to the other. Careful dehydration and precise mechanical sealing at each end see to that. Also, the special crimp seal used is no larger than the diameter of the tube, so that it will pass through any opening large enough for the tube itself.

Dryseal is made to new, more economical dimensional standards with tube sizes from  $\frac{1}{8}$ " to  $\frac{3}{4}$ " O.D. It comes neatly packed; two 50-foot coils to the carton. Carton is attractively designed so that it is easy to identify in stock. All of which makes for an easier, faster, trouble-free, quality installation.

Ask your distributor about Dryseal next time you order refrigeration tube. He has Dryseal and will give you prompt delivery.



**REVERE**

**COPPER AND BRASS INCORPORATED**

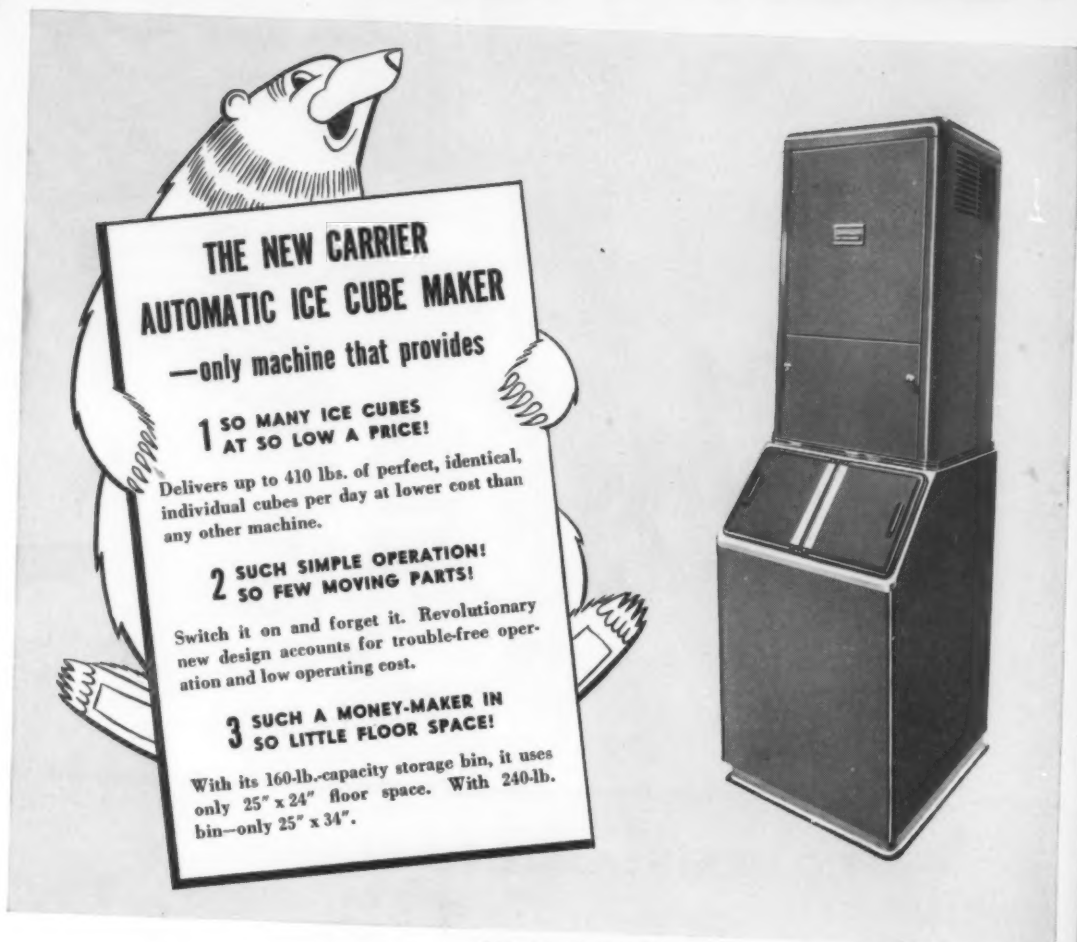
*Founded by Paul Revere in 1801*

230 Park Avenue, New York 17, New York

Mills: Baltimore, Md.; Chicago, Ill.; Detroit, Mich.; Los Angeles and  
Riverside, Calif.; New Bedford, Mass.; Rome, N. Y.

Sales Offices in Principal Cities, Distributors Everywhere.

# Two GREAT MONEY



**THE NEW CARRIER  
AUTOMATIC ICE CUBE MAKER**  
—only machine that provides

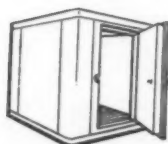
**1 SO MANY ICE CUBES  
AT SO LOW A PRICE!**  
Delivers up to 410 lbs. of perfect, identical, individual cubes per day at lower cost than any other machine.

**2 SUCH SIMPLE OPERATION!  
SO FEW MOVING PARTS!**  
Switch it on and forget it. Revolutionary new design accounts for trouble-free operation and low operating cost.

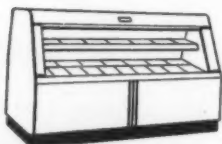
**3 SUCH A MONEY-MAKER IN  
SO LITTLE FLOOR SPACE!**  
With its 160-lb.-capacity storage bin, it uses only 25" x 24" floor space. With 240-lb. bin—only 25" x 34".

FOR RESTAURANTS! TAVERNS! HOTELS! HOSPITALS! CLUBS!

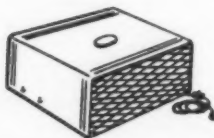
## OTHER STAR UNITS IN CARRIER'S COMPLETE REFRIGERATION LINE



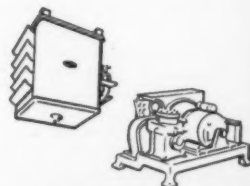
REACH-IN AND  
WALK-IN REFRIGERATORS



DISPLAY CASES



DEHUMIDIFIERS



CONDENSING UNITS  
AND COLD DIFFUSERS

TWO OF A GREAT LINE OF

JANUARY, 1950 • COMMERCIAL REFRIGERATION



# MAKERS by CARRIER



**THE CARRIER UPRIGHT  
30 CU. FT. FOOD FREEZER**  
—answers storage needs with

**1 1200-LB. CAPACITY IN  
16 SQ. FT. FLOOR SPACE!**

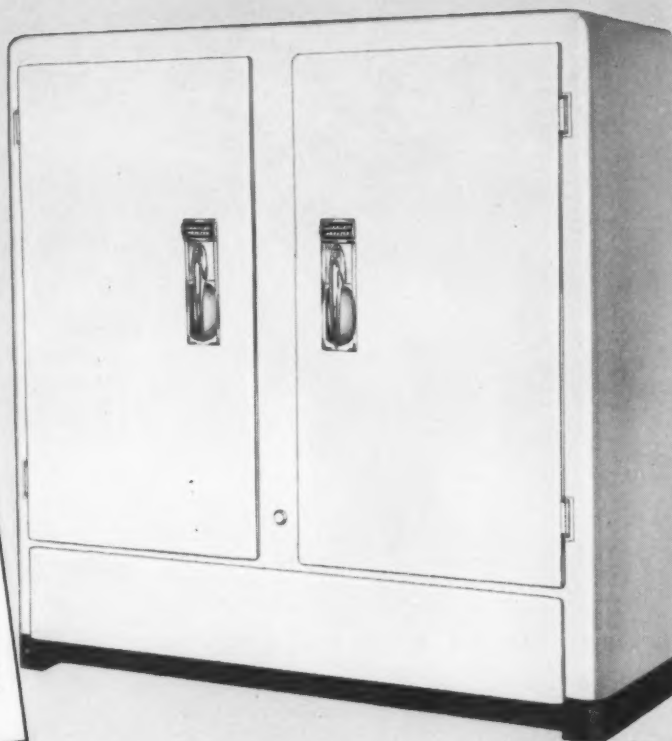
Big enough to serve the week-end peaks of average establishments. Handy front-door opening for "filing" food, not piling it.

**2 QUICK PLATE FREEZING!  
HERMETICALLY-SEALED UNIT!**

Two great value features . . . plus 5-year warranty. Extra-thick insulation also for economical operation.

**3 TEMPERATURE CONTROL!  
ALL-STEEL CONSTRUCTION!**

A touch of the dial provides choice of two temperature ranges — for freezing or storage. Ruggedly built for long life of trouble-free service.



FOR EVERY ESTABLISHMENT THAT SELLS OR SERVES FOOD!

**T**HESE TWO money-makers are the leaders of a great line of Carrier Commercial Refrigeration. New products . . . a complete line . . . long margins . . . styling with sales appeal—all these factors plus strong advertising and promotion make a Carrier franchise profitable all year round. For information, clip this coupon. Carrier Corporation, Syracuse, New York.

#### CARRIER CORPORATION

304 S. Geddes St., Syracuse 1, N. Y.

Please send me, without obligation, information on the Carrier Commercial Refrigeration line.

I am ☐ interested in becoming a dealer.  
I am not ☐ interested in becoming a dealer.

Name

Firm Name

Street

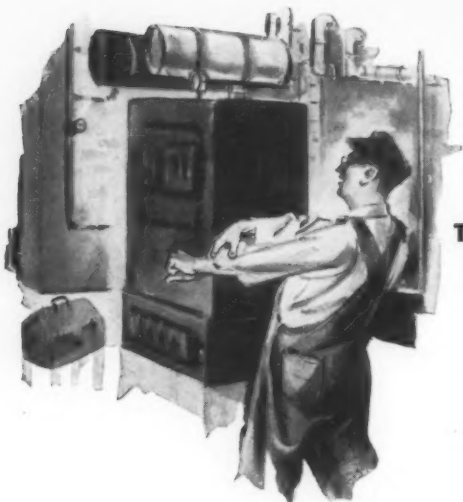
City  State

**Carrier**

**REFRIGERATION PRODUCTS**

## THE SWEET FEEL OF QUALITY

Formed from tubes, without seam or weld,  
Nibco Wrot Fittings are s-m-o-o-t-h,  
inside and out.



## THE PRIDE OF A JOB WELL DONE

Precision-built to fit, Nibco Wrot Fittings assure  
installations that reflect "top" craftsmanship,  
and more satisfied customers.

## THE PROFIT IN A COMPLETED JOB

Nibco Wrot Fittings speed the work,  
assure customer satisfaction, help make  
invoice agree with estimate.



# NIBCO

Build more business, protect your profit and assure customer satisfaction by standardizing on Nibco, the real quality line of Wrot Fittings. Everything you need for high grade installations in plumbing, heating, refrigeration and air conditioning. Elbows, tees, couplings, return bends, adapters, unions—in sizes from 1/4-inch to 4 inches. Formed by a patented process from the same copper tubes with which they are used.

Write now for Catalog F with complete information which makes it easy to order.

NORTHERN INDIANA BRASS COMPANY • 114 PLUM STREET, ELKHART, INDIANA

# ALL OVER THE COUNTRY YORK DEALERS are saying...



*"New Completely  
Hermetically-Sealed  
Refrigeration System..."  
"Five Year Guarantee..."*

## "YORK DEALERS HAVE AN UNBEATABLE LINE★ FOR 1950 SELLING"

Right now from coast to coast YORK Dealers are seeing and cheering the New 1950 Leadership Line of YORK Room Air Conditioners.

These far-advanced models include many unique features developed by YORK research engineers, which set an entirely new standard for the industry.

During the selling season just ahead, the demand will be for the very latest in room air conditioners, and that means YORK all the way. There will be only two kinds of air conditioner dealers . . . those who have YORK'S exclusive new features to sell . . . and those who have

the tough job of competing with YORK'S great 1950 line.

**YORK gives Dealers continuing support:**

- Leads from Direct Mail Program.
- Aggressive Sales Promotion.
- Strong Nationwide Advertising.
- Personal Aid from YORK Distributor.
- Modern Sales Training.
- A Complete Line of Unequaled Products.

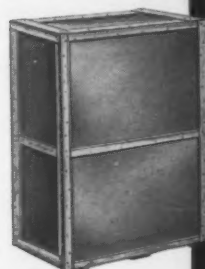
Do you want to get your full share of big profitable room air conditioner sales for 1950? Then move fast and get in touch with your nearest YORK Distributor. Or write us direct. A few franchises are still available for both full-line and specialty dealers who act without delay. York Corporation, York, Pa.



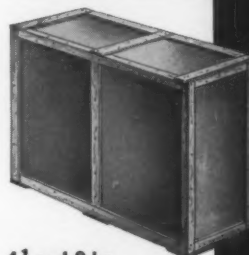
$\frac{1}{2}$  hp. Yorkaire Window-Sill Type, 1950 Room Air Conditioner.



$\frac{3}{4}$  hp. Yorkaire Window-Sill Type, 1950 Room Air Conditioner.



$\frac{3}{4}$  and 1 hp. Yorkaire Console Model Room Air Conditioners.



$1\frac{1}{2}$  and 2 hp. Yorkaire Console Model Room Air Conditioners.



★ If you want to get a look at these sensational beauties, hop over to your nearest York Distributor right away.

PIONEERS IN INVENTION AND  
DEVELOPMENT SINCE 1874

*Refrigeration and Air Conditioning*

HEADQUARTERS FOR MECHANICAL COOLING SINCE 1885



"PACKAGED" YORKAIRE CONDITIONERS



YORK AUTOMATIC ICE MAKERS



YORK UNIT COOLERS

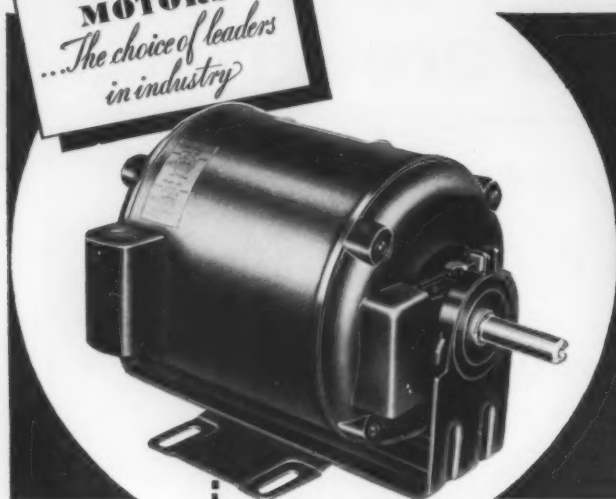
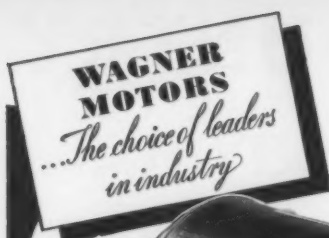


YORK FLAKICE MACHINES

YORK CONDENSING UNITS

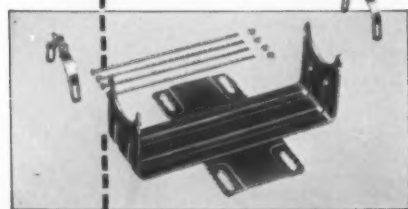
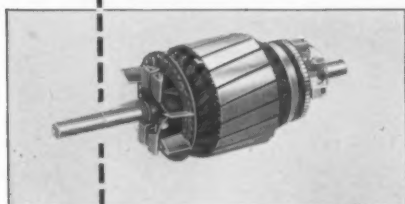
OUR BUSINESS IS IMPROVING YOUR BUSINESS

and AIR CONDITIONING • JANUARY, 1950



**Power Your  
Product  
With  
Dependability**

## Choose a Wagner Motor



Every painstaking step in the construction of Wagner Motors reflects the sound engineering and good workmanship that have made them famous for quality and durability for almost sixty years.

Wagner Motors are available in a wide range of types and sizes for every application. They are compactly built without sacrificing strength or efficiency and are the first choice of many manufacturers because of their dependable performance.

If you need motors that will give long, trouble-free performance and build customer satisfaction—choose Wagner Motors. Bulletin MU-185 gives complete information.

\* \* \*

Buyers of Wagner Motors get Nationwide Service! More than 450 Wagner Authorized Electrical Service Stations and Parts Distributors augmented by 25 Wagner-owned Service Branches are ready to supply on-the-spot service, factory guaranteed exchange motors, or genuine Wagner Parts. Write for Bulletin MU-24 for the complete list of names and locations.

**WAGNER ELECTRIC CORPORATION**  
6442 Plymouth Ave., St. Louis 14, Mo., U.S.A.

ELECTRIC MOTORS • TRANSFORMERS • INDUSTRIAL BRAKES  
AUTOMOTIVE BRAKE SYSTEMS — AIR AND HYDRAULIC

**BRANCHES IN 29 PRINCIPAL CITIES**

MSP-1

# CUT DOWN COSTLY CALL-BACKS— USE FRIGIDAIRE SERVICE PARTS!

Call-backs and adjustments can take all the profit out of repair jobs—so why risk them? Get every job done right—with Frigidaire Service Parts. They're built to the same high standards as original equipment—in a full line that gives you exactly the right part for any job. And they're easier and faster to install because they're made to fit. You'll find that Frigidaire Parts not only protect your profit—they build your reputation for quality work.



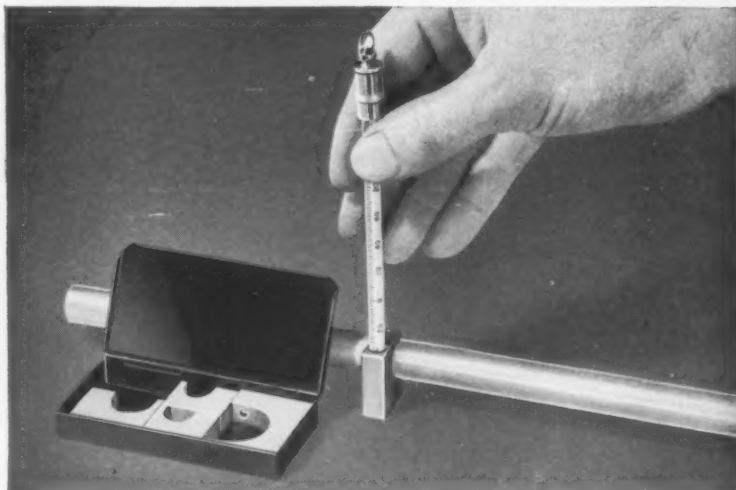
## ***Frigidaire Cuts Call-Backs!***

"We use Frigidaire Parts because they mean greater customer satisfaction and fewer call-backs to eat up our profits," says Dave Surfas, Surfas Refrigeration Co., Los Angeles, Calif.



## ***Insures Profits With Frigidaire!***

"Inferior parts always mean expensive call-backs that cut profits and irritate customers," says L. W. Scott, Refrigeration Sales & Engineering Co., Inc., Oklahoma City, Okla. "That's why we've used only Frigidaire Parts for the past 18 years. Nowhere else can we find quality that even comes close."



## ***For fast, accurate temperature readings —Frigidaire Clip-On Thermometer Wells***

You'll find these Frigidaire Clip-On Thermometer Wells are real time-savers. They enable you to check refrigerant and water line temperatures quickly and accurately with standard pocket thermometers. And they're easy to use—even in close quarters—because they're amazingly compact. The four standard sizes cover

virtually all your requirements.

Your nearby Frigidaire Parts Distributor has Clip-On Thermometer Wells in a handy pocket-size package, consisting of a sturdy metal carrying case with two  $\frac{1}{2}$ " wells and one each  $\frac{3}{8}$ ",  $\frac{3}{4}$ ", and  $1\frac{1}{4}$ " wells. Or you can purchase any of the wells individually.



## ***Using Frigidaire Parts Pays Off!***

"It's just good business to buy Frigidaire Parts," says Henry Marcus, Utility Sales & Engineering Co., Oak Park, Ill. "It pays off for us in fewer repeat calls—in easier, faster jobs—in customer good will."

## ***FREE! Frigidaire Parts Catalog →***

For full information about all Frigidaire Service Parts and Accessories, write today for your free Frigidaire Parts Catalog.



# FRIGIDAIRE Parts and Accessories



## **FRIGIDAIRE DIVISION**

General Motors Corporation

1417 Amelia Street, Dayton 1, Ohio. (In Canada, Leaside 12, Ont.)

Please rush my free copy of your parts catalog—"Genuine Precision-Built Frigidaire Parts and Accessories."

Name.....

Firm Name.....

Address.....

City.....County.....State.....



# "FOR ALMOST 30 YEARS...

## we have supplied PENN CONTROLS"

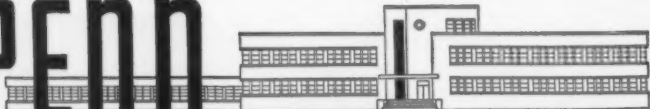
"Moreover, our PENN relationship and their cooperation are 100%."

That's the way Oliver Forslund... president of Forslund Pump & Machinery Corp., well-known Kansas City organization... expresses his experience with PENN over a *period of almost 30 years* in selling PENN refrigeration controls. Comments like this are typical because wholesalers know that not only is PENN's policy "tops" but that service men prefer PENN refrigeration controls.

And there are good reasons for this preference. Ease of installation, dependability, long-life accuracy? Yes... that's to be expected of PENN. But there's more! There's the new Series 321 Hot Gas Defroster which *automatically and positively* defrosts refrigeration coils at specified intervals. There's the Series 270... the *only* two-pole refrigeration control in the industry... the control which has set a new, high standard of performance. And there's more! Ask your wholesaler... or write direct... for full information. **Penn Electric Switch Co., Goshen, Ind.**  
Export Division: 13 E. 40th St., New York 16, U.S.A.  
In Canada: Penn Controls Ltd., Toronto, Ont.



# PENN



## AUTOMATIC CONTROLS

FOR HEATING, REFRIGERATION, AIR CONDITIONING, PUMPS, AIR COMPRESSORS, ENGINES, GAS RANGES

# RTU

*News • Laws • Trends*

## Last Word On The Industry Show

**J**UDGED from almost any angle, the 6th All-Industry Show shapes up as the "biggest and best" yet. Number of exhibitors rose from 174 at Cleveland in January of 1948 to 212 at Atlantic City. Attendance reached 9,681 by actual count, passing by several hundred the last Show's total. A great many new products and new designs were displayed; more, some say, than ever before.

One manufacturer reportedly sold 65 carloads of food freezers during the first four days of the Show. On the basis of interest shown and business booked, a number of spokesmen for the industry predicted sales above the 1949 level for the first six months of 1950. Fourteen foreign countries were represented by 120 registrants who availed themselves of the special REMA "international headquarters" booth.

REMA president K. B. Thorndike has announced that four sectional conferences and exhibits will be held in conjunction with RSES during 1950—and that the 7th All-Industry Show will be held at Navy Pier, Chicago, in November, 1951.

## The Buyer Gets A Break

**T**EKNI-CRAFT, manufacturer of ice cream counter freezers, has announced a new policy in connection with the introduction of its 1950 line—a policy of listing, and advertising, the retail prices at which the freezers are to be sold. This is a distinct departure from previous practices in that segment of the industry; up to now, the prices were quoted by distributors, and the customer, until he really "got down to cases", probably had little or no idea of exactly how much he was letting himself in for. More details of this new pricing policy are given in the News and New Products pages of this issue. From here, it looks like a move in the right direction.

## The Iceman Cometh Again And Again

**R**EFRIGERATION men who think that the old-fashioned ice box vanished with the coming of mechanical refrigerators will be surprised to learn that, according to figures released recently by the National Association of Ice Industries, there is still one ice refrigerator for every two mechanical refrigerators in use.

Ice men are delivering just as much ice today as they

did 20 years ago. Consumption has increased from 25 million tons in 1925 to some 50 million tons last year. What's the reason? Well, the association says, more people are using ice in more different forms today than ever before. Restaurants are serving more foods on, or with, ice. And owners of mechanical refrigerators still call on the ice company for cubes and sized ice for parties. Smart refrigerator dealers won't make the mistake of underestimating the vigor of an old competitor.

## The Freons And How They Grew

**M**OST refrigeration men are well acquainted with the widespread use of Freon refrigerants, but do you realize that they're also important in a number of other fields? R. J. Thompson, director of sales for Kinetic Chemicals, Inc., told of some of these other uses in a recent speech before the Southern California Council of Refrigeration Societies at their second annual dinner meeting. They include use as propellants for insecticides, perfumes, paints, and even medical preparations.

More than 100 Freon refrigerants can now be produced, Thompson said, enabling one to be "tailor-made" for virtually any type of application or equipment. Of interest also was his statement that more than 400 million pounds of the refrigerant have been produced, and that more of it is now made in a single day than was produced in a year when it was first put on the market.

The organization sponsoring the meeting is comprised of ASHVE, ASRE, NAPRE, RSES, the Refrigeration Contractors Association, and the Refrigeration Manufacturers Association of Southern California.

## A Uniform Service Plan

**S**OMETHING new in water cooler service is being introduced by Sunroc Co., water cooler maker of Glen Riddle, Pa., with the provision that service men of its branches and sales agencies all over the country be attired in spotless white shop coats symbolizing the importance of sanitation in connection with drinking water.

This new service uniform, with the words "Sunroc Service" embroidered over the pocket, already is in use in the company's Philadelphia branch, and will be in evidence in all other Sunroc sales agencies just as quickly as the coats can be produced and distributed.

## Good Earth And The Heat Pump

**T**HE earth is an adaptable source of heat for homes in the Chicago area, R. A. Budenholzer, professor of mechanical engineering at Illinois Institute of Technology, told a recent meeting of Sigma Xi, professional research fraternity, on the Illinois Tech campus.

Recent studies have shown that the best source of heat is the ground when the soil has a high thermal conductivity, Budenholzer said. Since thermal conductivity increases with moisture content, a dry soil is unsuitable. Soil in the Chicago area has been found ideally moist, he said. "In Chicago an area equal to 75 x 75 feet is sufficient for a heat withdrawing coil capable of supplying the needs of a six-room home," he declared.

# Does the New Wage-Hour Law Affect You?

**N**O LEGISLATION enacted by the recent Congress is likely to affect your business more than the newly amended Fair Labor Standards Act—better known as the Wage-Hour Law. Some of you may find yourselves subject to far more rigid requirements; others may have become partially or totally exempt. But, however the law affects you, it's important to know where you stand. This article, written by a prominent labor economist, will help you do that.

**By S. Herbert Unterberger**

Director of Research Labor Relations  
Information Bureau, Washington, D. C.

**J**UST before it recessed, Congress boosted the minimum wage to 75 cents an hour and made other very substantial changes in the Wage and Hour Law. The new law, which goes into effect on Jan. 25, 1950, affects more businesses than any other legislation passed this session.

Every employer has to find out where he stands under this new law. He must observe the new wage requirements or run the risks of suits for back pay and damages, injunctions, and even criminal prosecutions.

Equally important, the employer will want to know in what respects the law's requirements have been eased. He will have to decide whether it would be worth while to take advantage of these relaxations.

The most sweeping change, affecting more than a million and a half workers, is the increase in the minimum wage from 40 to 75 cents an hour. This affects employees in in-

terstate and foreign commerce who are not specifically exempted by some special provision.

In addition, the law makes three principal changes:

(1) It redefines which employees are covered by it. Some categories are added and some are subtracted. The net effect will be to exempt a sizable number of employees (more than 200,000) who were previously covered.

(2) In some important respects, it revises the methods for determining when overtime must be paid and for calculating what the overtime amount should be. The effect will be that some employers will be able to save some overtime payments and many will be able to simplify their payroll accounting.

(3) The penalties are made somewhat less severe. Double damages may be waived and businessmen who unwittingly deal in "hot goods" (goods made under illegal conditions) are protected.

An employee was and continues to be covered if he is clearly engaged in interstate commerce or in the production of goods for interstate commerce.

Generally, an employee who was covered under the old law continues to be covered by the new. Whether you will have to observe the higher minimum wage and the new overtime provisions and whether you will have to maintain and preserve wage records depends on how closely your own employees are related to interstate commerce.

Under the old law, an employee would also be covered if he engaged in work that was deemed "necessary" to such production. Many an employer was caught as a violator even though his employees did not appear to have any substantial relation to interstate commerce. In questionable cases, both the Wage and Hour Administrator and the courts generally ruled that the employees were covered by the law. Thus, even where the relationship to interstate commerce was far-fetched the employees were likely to be held to be covered.

For example the employees of a small fertilizer company were held to be covered because the fertilizer was used by local farmers in the raising of sugar cane for the production of sugar which was to be shipped out of the state. Similarly the employees of a quarry were held to be covered because the stone was delivered in the same state to a dike which would prevent a flood in an oil field producing for interstate commerce. The law was also applied to employees of a window cleaning company some of whose customers were engaged in interstate commerce and to the employees of a nursery who mowed the lawn of a customer engaged in interstate commerce.

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*Congress has made it clear that the new law is not to be held applicable to the employees in the preceding illustrations and others like them. On the other hand, an employee not directly engaged in producing goods for interstate commerce will still be covered if he is engaged in a closely related process or occupation directly essential to the production of such goods.*

Thus, Congress made it very clear that it did not mean to eliminate clerical workers, maintenance men and custodial employees who work in establishments producing goods for interstate commerce. Even though the goods do not actually pass through their hands, they are to be regarded as engaged in a closely related process or occupation directly essential to their production.

How much change does this really make? What it boils down to is that Congress told the Wage and Hour Administrator and the courts that, henceforth they should not stretch the law's coverage the way they used to. By amending the law and changing the words, Congress gave them an occasion and an opportunity to reverse many of their former rulings.

### Retail Service Exemptions

The original Wage and Hour Law intended to exempt the ordinary retail or service establishment doing most of its business within the same state. Complications arose where the establishments also engaged in some wholesale trade or carried on manufacturing in the same establishment.

The new law tries to make the definition more specific. To qualify for the exemption, a retail or service establishment must meet the following tests:

(1) More than 50% of its annual dollar volume of sales must be made within the state in which the establishment is located.

(2) At least 75% of its annual dollar volume of sales must not be for resale, and must be recognized in the particular industry as retail sales or services. Establishments selling building supplies and materials should be aware of the fact that the law specifically states that "resale" shall not include the sale of goods to be used in residential or farm building construction, repair or maintenance. . . ."

If the retail establishment also manufactures some or all of the goods

### QUICK FACTS ABOUT THE NEW LAW

**T**HE newly amended Fair Labor Standards Act, more commonly known as the Wage-Hour Law, goes into effect on January 25, 1950.

*Its most sweeping change, as compared with the former law, is the increase in the minimum wage from 40 to 75 cents an hour for employees in interstate and foreign commerce who are covered.*

*The new legislation redefines which employees are covered by it. Some new categories have been added; some formerly covered have been dropped. Net effect will result in exemptions for some 200,000 employees who were previously covered.*

*It revises the methods for determining when overtime must be paid, and for calculating what the overtime amount should be. As a result, some employers will be able to save some overtime payments, and many will be able to simplify their payroll accounting.*

*In respect to penalties for violations, the new law is somewhat less severe than the original act. Double damages may be waived, and business men who unwittingly deal in goods not made in compliance with the act are protected.*

which it sells, the new law exempts all of its employees including its manufacturing employees, provided the following three additional tests are met:

(1) It must be recognized as a retail establishment in its particular industry.

(2) The manufacturing and the selling must be done at the same location.

(3) More than 85% of the annual dollar value of the goods which it makes or processes must be sold within the state in which the establishment is located.

These provisions will be of special interest to such combined manufacturing-retailing establishments as bakeries, merchant tailors, ice-cream parlors, ice plants, etc.

If an employer wishes to qualify for the retail or service exemption, he should have records to prove that he meets the tests. His records should show which sales are made within the state as well as which are made for resale. If there is any doubt about his being recognized as a retail sales or service establishment, he should take steps to secure such recognition. He may also want separate records

for the sales of goods which have been manufactured at the same location.

If he fails to meet any of the tests, the employer can take steps to qualify. For example, if slightly less than 50% of his sales are made within the State he may find it desirable to eliminate some out-of-state customers or to intensify his promotion of local business.

### Other Important Exemptions

The new law exempts certain kinds of workers who had not been exempted before. They include certain irrigation workers, the employees of taxicab companies, of small loggers and sawmills, of contract telegraph agencies, and newsboys.

It also permits an exemption to somewhat larger newspapers and larger telephone exchanges than formerly.

It continues in effect the exemption for agricultural workers; seamen; employees of street, suburban and interurban electric railways, trolleys, or motor buses; and employees of the fishing industry. Also continued is the exemption for executives, admin-



# YOU CAN'T DO BUSINESS FROM AN EMPTY WAGON



**T**HE old peddler, once a mainstay of distribution in the United States, knew that important fact. His wagon creaked under the weight of housewares as he started out on Monday and rattled home empty by Saturday.

Knowing where to go and whom to sell at a profit is still a fundamental sales and credit principle.

Profits are made on goods sold and delivered. Profits are made on merchandise purchased and consumed. Profits are made on a confident approach to a market.

Pinchpenny buying of a dozen when a gross is needed is wasteful and expensive to the manufacturer, distributor, and consumer alike. Empty shelves create suspicion of fear. Full stocks of fresh merchandise stimulate confidence. Selectivity invites attention and action.

Inventories are dangerous when they are the result of wrong selection or poor timing. But good management means sufficient stock to meet the daily, or seasonal needs.

Buy wisely, but confidently. Buy your known requirements and benefit by established quantity discounts. Act as if you knew you were going to be in business this year, next year, and the year after.

Stock and sell. Don't let the dust gather on empty shelves. You can't make a profit without a sale.

**W. T. Van Atten, Vice-President, Dun & Bradstreet, Inc.**

istrative and professional employees, those employed in a local retailing capacity and outside salesmen. However, the regulations defining which employees are included in these five categories are being revised. When the revisions become operative, it is expected that some presently exempt employee will no longer be exempt.

Also unchanged is the overtime exemption for 14 weeks in a year in seasonal industries. Minor changes have been made in the conditions under which the guarantee of annual wages relieves the employer of the liability for overtime.

The Wage and Hour Administrator continues to have the right to authorize partial exemptions—from the minimum wage, but not from the

overtime requirement—for learners, apprentices, messengers and handicapped workers.

On the other hand, two groups—the employees of air carriers and fish cannery—which used to be exempt from both the minimum wage and overtime provisions of the law, are now in the same category as motor carriers, railroads, express, oil pipe line companies and water carriers whose employees are subject to the minimum wage but not to the overtime provisions.

Finally, the law now covers employees engaged in importing operations.

It is clear from this discussion that deciding whether certain employees have become exempt is frequently a

difficult technical problem. To be safe, expert assistance should be utilized. If certain of your employees are really exempt there may be much to gain by knowing that; but also much can be lost by a wrong decision.

## New Overtime Rules

Just like the old law, the new law provides that work in excess of 40 hours per week must be compensated at not less than 1½ times the regular rate of pay. But there is a difference. The old law did not define what it meant by working time and by the "regular rate".

As a result, the Wage and Hour Administrator and the courts developed their own meanings for these concepts. These definitions were frequently very rigid, and sometimes unrealistic and contradictory. The new law spells out the definitions in greater detail.

## Meaning of Working Time

Even before the new law was passed, the Portal-to-Portal Act of 1947 amended the original Wage and Hour Act of 1938 so as to clarify the meaning of working time. It will be remembered that the Portal-to-Portal Act was passed to stop a flood of law suits, which claimed compensation for waiting time, make-ready time, gate-to-bench time and other varieties of non-productive time. This flood was encouraged by a Supreme Court decision which made it appear that all these would be included in working time.

The Portal-to-Portal Act laid down the general rule that activities need not be included in working time if they take place before an employee begins or after he ends his productive activities, except if there is a contrary contract, custom, or practice in the establishment.

The new law specifically permits the parties to a collective bargaining agreement to exclude from working time any time spent in changing clothes or washing at the beginning or end of the working day. Where clean-up time is being paid for, it is now possible to change this practice by changing the collective bargaining contract.

## Computing Regular Rate

The new law tries to state much more specifically than ever before precisely what should and should not be  
(Continued on page 64)





## SUNISO HELPS HOLD CUSTOMER 15 YEARS

### Refrigeration Equipment Distributor Makes Steady Customer As Result of Performance of Suniso-Charged Compressor

When a wholesale processor of pork products started in business he bought a single 1 hp compressor. The refrigeration equipment distributor who sold it to him charged it with Suniso. The first compressor performed so well that as business expanded and more equipment became necessary, the processor continued to buy from his original supplier.

In 15 years, unit after unit has been added. Today the processor has 10 compressors ranging as high

as 10 hp, used in a great variety of cooling operations, and all charged with Suniso. There has not been a single failure due to lubrication—even in summer, when the equipment is subjected to heavy loads, and the temperature of the meat must be closely controlled.

This is but one instance among many that indicate the profitable results to be expected from the use of the right "Job Proved" Suniso Oils in refrigeration and in air-conditioning. It is performance such

as this that has made them the predominant choice of original equipment manufacturers.

The different grades of Suniso Oil have extremely low pour-points and low wax-separation points. All have exceptionally high dielectric strength and high resistance to chemical change when mixed with Freon or any other modern refrigerant. Ask your Suniso jobber for a free copy of the illustrated booklet "Lubrication of Refrigeration and Air-Conditioning Equipment."

**SUN OIL COMPANY • Philadelphia 3, Pa.**

*In Canada: Sun Oil Company, Ltd.  
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**SUNISO REFRIGERATION OILS**  
"JOB PROVED" THROUGHOUT THE INDUSTRY

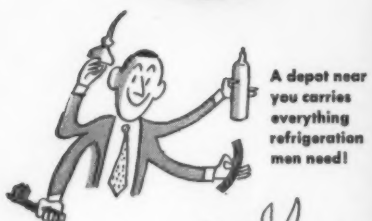


# MORE SALES—less fuss



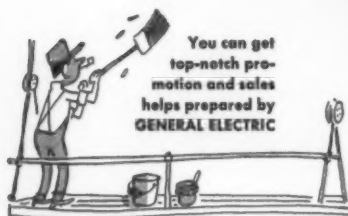
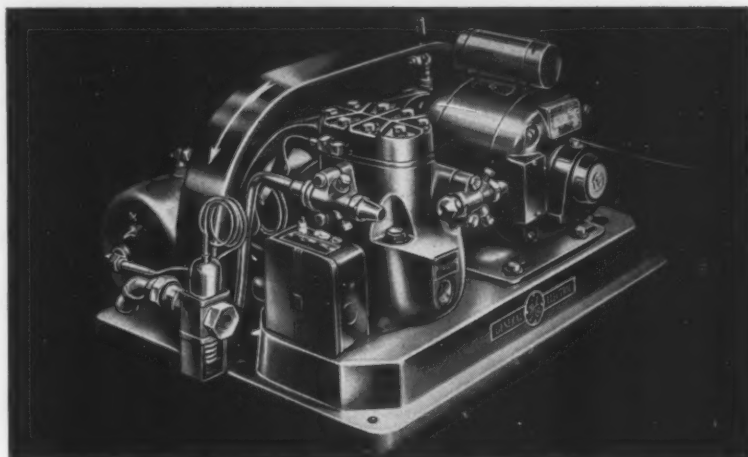
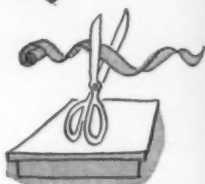
## CONDENSING UNITS AND REPLACEMENT PARTS

**FAST!**  
AT 60 G-E  
WHOLESALE  
PARTS DEPOTS  
ALL OVER THE U. S.



A depot near  
you carries  
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refrigeration  
men need!

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G-E Parts Depots handle: G-E con-  
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1/8-75 hp.; G-E sealed condensing  
units for replacement.

G-E dependability  
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business.



### FREE condensed catalogs

General Electric Company, Air Conditioning Department,  
Section CR-19, Bloomfield, N. J. Please send me the new G-E  
Condensing Unit and Replacement Parts catalogs and your  
compressor body selection tables.

I am a ☐ service engineer; ☐ dealer.

Name.....

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City..... Zone..... State.....

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← TODAY**

**GENERAL  ELECTRIC**

# adequate refrigeration boosts baker's production

# 300%

Show your prospects how they can increase their output and their profits—like this bakery did—by modernizing their refrigeration equipment, and you lower their sales resistance to zero

**D**O YOU have a bakery prospect you've been trying to sell? Have you been having a tough time convincing him that the installation of some new refrigeration equipment really will boost his business—and his profits?

If so, then tell him the story of the Frost Pastry Shop in Denver, Colo., which has managed to increase its production 300% in the same amount of bakery space through the installation of a variety of custom-tailored refrigeration units supplied by the Behrens Fixture & Refrigeration Co.

The Frost Pastry Shop was purchased recently by Herman Gulkin, a veteran retail baker. Finding the available space and facilities extremely limited for the quantity production he had in mind, baker Gulkin threw out all of the existing refrigeration equipment and contracted with the Behrens organization to build three high-capacity refrigeration units designed to occupy a minimum amount of space.

Largest item of this new equipment is a dough retarder which occupies one wall of the store, immediately behind the entrance from the bake shop, and replaces the reach-in previously used. This big reach-in cabinet, which cost \$1100, measures 10 feet long, 8 feet high, and less than 3 feet deep.

The cabinet's four vertical compartments, each with its own access door, will accommodate a total of 140 18x22-inch stainless steel dough pans. Held at 40 F, this box is used for storage purposes as well as dough retarding.

Insulated with 2 inches of cork, the cabinet is powered by a 1½-hp par condensing unit connected with a blower coil at the top. It is finished

in white enamel and fitted with chromium hardware which creates an excellent impression on visitors to the bakery.

Next, the Behrens organization removed an old-fashioned, space-consuming, walk-in cooler in the left rear corner of the shop and constructed a special "ingredient refrigerator" in the center of the bakery.

This unit was designed to provide table space as well ingredient refrigeration. Measuring 3½ feet square it stands 4 feet high and is surfaced with a hardwood top which may be used either as a working table or as a place in which to stack surplus material and supplies.

One large door provides access to the 22-cu. ft. interior which is used for storing fats, oils, whipped cream, eggs, fruit, marshmallow, and other ingredients requiring refrigeration

yet needed in everyday baking operations. Located against the center of the back wall it is convenient to bakers during all operations.

The ingredient box is powered by a ½-hp compressor. Exterior is of  
(Continued on page 74)



This custom-built ingredient refrigerator, which provides working or storage space on top, replaced a bulky walk-in cooler.



The new dough retarder, held at 40 F, is also used for general storage. It accommodates a total of 140 steel dough pans. Finished in white enamel with chromium hardware, it creates a good impression on visitors.

# CONTRACTORS

News • Activities • Plans

## Noll Elected RACCA President; Augmented '50 Program Set

**M**EMBERS of Refrigeration and Air Conditioning Contractors Association at their fourth annual convention in Atlantic City set a course aimed at advancing cooperation between the various segments of the refrigeration and air conditioning industry, elected new officers and directors for 1950, and heard a program of talks designed to help them plan successfully for the year ahead.

R. W. Noll, of Los Angeles, was elected president of the association for the coming year, succeeding H. E. Wheeler, of Chicago.

Other officers named were Theodore A. Reina, of Brooklyn, N. Y., first vice president; A. M. Palen, of St. Paul, second vice president; L. J. Quinn, of Cincinnati, treasurer; Ralph W. Lampie, of Richmond, Va., recording secretary; and A. G. Weber, of Detroit, sergeant at arms.

Directors, besides the officers, include G. T. Rostock, Kansas City,

Mo.; E. S. Matthews, Spokane; Cecil Kirby, Miami; B. C. McCall, Chattanooga, Tenn.; E. C. Newton, Newark; and Wheeler.

Reporting on the association's activities during the past year, President Wheeler mentioned as of foremost importance the removal of the national headquarters office to Chicago and the agreement reached last March with the United Association.

The first-named action, he said, has resulted in RACCA's internal affairs being in good shape, and has worked out to the association's benefit.

The Miami agreement with the United Association, Wheeler said, "has been widely misunderstood and misquoted."

"It is not, as has been erroneously stated, an agreement whereby the two parties undertook to negotiate labor agreements on a national level," the RACCA president declared. "It plainly states that such negotiations will

be carried on between the local union and the local association, where there is one.

"Something over 50% of our membership employs union labor. For them this agreement means a chance to have bargaining rights as to the terms of employment of that labor, something they did not always have before. Furthermore, and in my opinion, most important of all, it provides a means of supplying adequately trained mechanics through an apprentice program aimed specifically at the needs of our industry. The United Association has indicated that they are ready and willing to do their part in this matter financially and otherwise whenever we are ready to do ours."

Wheeler said that future plans include an attempt to provide a budget which will support a traveling secretary, the directors being convinced that the membership cannot be successfully serviced in any other way.

Another development characterized by Wheeler as deserving most careful attention is the complaint RACCA has filed with the Federal Trade Commission alleging that the dairy, ice cream and bottling industries habitually violate Section 3 of the Clayton Act.

"If we can get favorable action on this complaint," he said, "we have an excellent chance to restore to this industry all of the business that has been lost through this source, and at an expense of time and money that we can well afford. Compared to any other means at our disposal, this seems by far the most promising."

He called for a higher degree of cooperation between the various industry associations, in the interest of general industry advancement. RACCA, he said, has consistently held this attitude, adding that "if we go on preaching the gospel of cooperation between all factors in this industry it will in time take effect."

Warren W. Farr, reporting on activities of the trade relations committee, of which he is chairman, suggested that local contractor associations deal on that level as far as their individual problems with refrigeration wholesalers are concerned, since establishment of a national policy regarding any particular problem would be difficult to achieve. The national association, he added, will

(Continued on page 59)

### CONTRACTORS' 1950 OFFICERS AND DIRECTORS



Some of the officers and directors of Refrigeration and Air Conditioning Contractors Association are pictured above. In the front row (l. to r.) are: A. M. Palen, second vice president; R. W. Noll, president; Edna Berggren, executive secretary; H. E. Wheeler, immediate past president; and T. A. Reina, first vice president. Standing are G. T. Rostock, director, region 5; A. G. Weber, sergeant at arms; L. J. Quinn, treasurer; and E. S. Matthews, director, region 6. Reina, Weber, Quinn and Matthews are newcomers to the RACCA directorate.



# ABOUT *People*

**R. Roger Rosell Jr., Paul A. Palmgren, and Fred H. Angier**



Rosell



Palmgren



Angier

have been named as branch managers of three new factory offices opened recently by General Controls, Glendale, Calif., control manufacturing firm. Rosell will manage the Minneapolis branch, Palmgren the Buffalo branch, and Angier the Baltimore branch of the company. General Controls now has factory branch offices in 21 major cities from coast to coast, according to J. F. Ray, vice president in charge of sales for the company.

**Alfred C. Dappert** has been appointed general sales manager of Mueller Brass Co., Port Huron, Mich. He has been associated with the company for more than 25 years, beginning as sales representative in the central states area. He served for 10 years as manager of the company's district sales office in Chicago, and last year was transferred to the main office in Port Huron as a divisional sales manager.

**William G. Cusik** has been appointed district manager of the eastern region for Whiting Corp., freezer manufacturer. He formerly was associated with Kelvinator as district manager in the Chicago area,

and for the past three and a half years has been a district manager in the company's eastern regional territory. He will work out of Whiting's home office in Harvey, Ill.

**Ralph S. Penn and E. B. Maire** have been elected vice-presidents of Penn Electric Switch Co., Goshen, Ind.

Penn has been active in the company since 1937, and has served as manager of several of the company's district offices. Most recently he has been manager of the special products division, with headquarters at Goshen.

Maire has been active in the control industry for the past 15 years. He joined Penn Switch in 1934 and for several years managed the company's district office in Chicago. He returns to Penn after three and one-half years in other phases of the control industry.

**Geoffrey A. Cook** has been appointed advertising and sales promotion manager of the Deepfreeze Div. of Motor Products Corp., announces George F. Weisenbach, general sales manager. Cook succeeds R. V. Newbell, who was recently appointed manager of home freezer sales. He formerly held the position of advertising and sales promotion manager of a leading automotive supply company, and prior to that was advertising manager of an industrial lumber firm serving major appliance companies.



**Paul R. Stewart**, who has been selling creative advertising for Cincinnati firms since 1936, has been ap-

pointed advertising and sales promotion manager for C. Schmidt Co., Cincinnati commercial refrigerator manufacturer. According to Herman C. Ahrens, president, he will supervise an expanded merchandising program for the company, including development of dealer assistance plans and trade publication advertising campaigns.

**Edward D. Kemble** has been appointed plant manager of the automatic heating division of the General Electric Co.'s air conditioning department. Prior to his appointment, Kemble was plant manager of the Clark Equipment Co.'s lift truck plant in Battle Creek, Mich.

**Peter T. Wotton** has been appointed advertising and publicity director of Typhoon Air Conditioning Co., Inc., according to an announcement by J. F. Dailey, president.



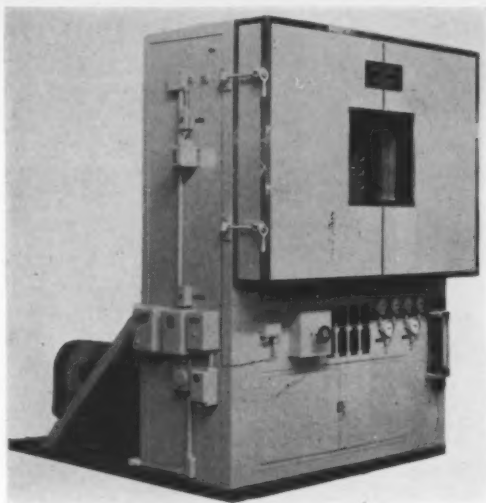
**Edward L. Garfield**, secretary-treasurer of Typhoon, who has managed the firm's advertising and publicity in the past, will retain supervisory control, and with this change will be able to devote more time to Typhoon's current expansion and development of the company's new 15 and 20 ton units.

Wotton has spent the past three years with Benton & Bowles advertising agency, where he was a staff member in the publicity department.

**D. S. MacDonald** has been appointed assistant to the manager of the gear motor sales division of General Electric's small and medium motor divisions, H. W. Bennett, division manager, has announced. MacDonald formerly was a motor control specialist in the company's apparatus department Baltimore office.

**E. N. Guild** has been appointed general sales manager of Victor Products Corp., Hagerstown, Md., announces J. K. Noel Jr., vice president in charge of sales, who said that the appointment is one of several moves





## FLEXIBILITY PLUS!

**N**EW developments in research equipment are exemplified in a refrigeration unit utilized by Texas Co. which includes some innovations not ordinarily found in this type of equipment.

Developed by Tenney Engineering, Inc., in cooperation with Texaco engineers, this unit is completely valved so that any part of the system can be by-passed during testing operations.

Particularly interesting is the use of three different types of low side evaporators which are completely interchangeable, one with another. These include a plate coil, a bare tube coil, and a finned tube coil. The design permits any one evaporator to be substituted for either of the other two.

Quick change, tightly sealing latches make the changing of evaporators a comparatively simple and easy operation. All evaporators have exactly the same overall dimensions so that changes are easily made and comparative data is quickly obtained.

Thermostatic expansion valves are located inside the cabinet and on the outside, either or both of which can be used or cut out of the system through a by-pass arrangement. A thermostatic expansion valve is also being used on the sub-cooler. A manual control is provided for use when thermostatic valves are cut out of the system.

Other features which have made this Texaco testing unit more than ordinarily versatile are the inclusion of reversible feeds on the top and bottom of the evaporators, visual inspection sight flow glasses, and provision for taking complete temperature and pressure measurements while the unit is in operation.

being made to expand the company's operations. Guild, who will make his headquarters in Hagerstown, has been in the refrigeration and appliance field since 1927, and for the past 16 years has been with Norge Div. of Borg-Warner Corp., in engineering, export, and domestic sales posts.

**Robert A. Gray**, who left the Mueller Brass Co. in August of 1946, and who later became president and treasurer of the Refrigeration Valve and Mfg. Co. (a Port Huron concern), has rejoined the staff of Mueller Brass as a refrigeration engineer. Before leaving in 1946, Gray had had 18

years in Mueller service. In his new assignment, he will be concerned with the development and application of Mueller Brass Co. refrigeration products and assist Mueller customers in solving their refrigeration problems.

The General Electric Co.'s appliance & merchandise department has appointed four men to new positions in its district sales organization.

**H. Gordon Smith**, has been named manager of appliance sales in the Pacific district. Effective Jan. 1, **Harlan C. Davis**, **H. A. Warren** and **James M. Walker** became managers of appliance sales in the central, southeastern and Great Lakes districts respectively.

Smith, who succeeds the late Ben Tassie, has been assistant district appliance sales manager in San Francisco since 1948. Davis, who came with General Electric in Kansas City in 1934, succeeds Warren as appliance sales manager in that city. Warren is being transferred to Atlanta, where he succeeds Walker. Walker will make his headquarters in Cleveland, where he succeeds R. A. Buescher, who is being transferred to Philadelphia as assistant manager of appliance sales for the Atlantic district.

**Leo F. Brown** has been appointed plant manager of the air conditioning equipment plant of the General Electric Co.'s air conditioning department. Prior to his appointment, Brown was associated with the Houdaille-Hershey Corp., serving as manager of the Detroit plant from Sept. 1948 and the Jackson, Mich. plant from 1946 to 1948.

**J. G. Fath** has been named manager of contract sales and statistics for Deepfreeze Div. of Motor Products Corp. Fath was appointed to his new position to replace J. E. Guertin, who resigned. He formerly handled product service operations.

**Emanuel Feinberg**, 6432 Cass Ave., Detroit, has been named representative for Acme Industries, Inc., in Detroit and surrounding counties. Feinberg was with Acme in Detroit, leaving to head American Thermal Industries.

# demand **DETROIT CERTIFIED**

## VALVES



**No Matter How You Look at it...**

No matter how you look at it—from the standpoint of sales, profits, or customer satisfaction—the new **DETROIT 777** valves are a truly remarkable advance in the refrigeration field. Rugged, simple, compact construction makes them a sales natural, while their added economy and easy servicing requirements mean both initial and long-range profits. Too, the efficient and dependable performance of these valves results inevitably in real customer satisfaction. Truly, the **DETROIT 777** series was made to order for you—designed and built from the accumulated experience of men who know your problems. Learn for yourself why **DETROIT'S** new 777 expansion valves are the talk of the industry, by contacting your nearest **DETROIT** distributor. It's another great **DETROIT** achievement—helping you with your future.

**"IT'S A NATURAL"**  
*for Sales and Profits!*

### The New 777 Series Brings You:

- Simple, compact, and rugged construction.
- Large wrench flats—for standard wrenches.
- Cartridge needle and seat assembly simplifies cleaning and inspection.
- Accessible superheat adjustment.
- Stainless steel and brass throughout.
- Anchored Capillary for strength.
- Polished Flare Faces.
- Ball-Type Needle gives desirable flow characteristics.
- Interchangeable Inlets  $\frac{1}{4}$  and  $\frac{3}{8}$  SAE.

# DETROIT

**LUBRICATOR COMPANY**

5900 TRUMBULL AVE., DETROIT 8, MICHIGAN  
Division of **AMERICAN RADIATOR & Standard Sanitary Corporation**  
Canadian Representatives: **RAILWAY & ENGINEERING SPECIALTIES, LTD.**—Montreal, Toronto, Winnipeg



**DETROIT HEATING AND REFRIGERATION CONTROLS • ENGINE SAFETY CONTROLS • FLOAT VALVES AND OIL BURNER EQUIPMENT • DETROIT EXPANSION VALVES AND REFRIGERATION ACCESSORIES • STATIONARY AND LOCOMOTIVE LUBRICATORS**

*Serving home and industry* AMERICAN STANDARD • AMERICAN BLOWER • CHURCH SEATS • DETROIT LUBRICATOR • KEWANEE BOILER • ROSS HEATER • TONAWANDA IRON

# ELECTRONIC CONTROL

## in Air Conditioning

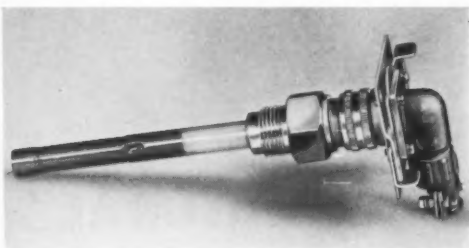
How and why the modern science of electronics is being applied to the field of air conditioning control is outlined in this article. Part 2 points out some basic applications

### PART 2

**T**HE most basic application of electronic air conditioning controls is control of a modulating valve on a simple heating or cooling system.

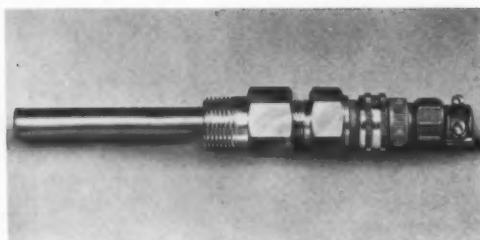
The diagrammatic sketch in Figure 4 illustrates the layout of controls for a typical system. The electronic bridge

is identical to that shown in Figure 3 (see December issue). The sensitivity of the thermostat can be varied in such a manner that a space temperature change of 1/15 of a degree F can energize the relay and cause repositioning of the valve motor.



#### DUCTSTAT

Consists of a 500-ohm coil of resistance wire on a cylindrical form impregnated to resist moisture. A typical application is its use as a compensator in an air conditioning system as shown in Figure 6.



#### IMMERSIONSTAT

Basically identical to ductstat except that it is fitted with a well to protect the element from the liquid medium in which it is immersed. A typical application is its use where water temperatures must be controlled as shown in Figure 7.

By R. J. Michals

Commercial Division  
Minneapolis-Honeywell Regulator Co.

As a word of caution, it must be remembered that where extreme sensitivity is required, the proper selection of primary equipment must be made. Obviously, if the cooling coil and valve are improperly sized, discharge temperature will fluctuate widely.

If droop<sup>1</sup> in a system is to be expected it may be eliminated by adding a compensator, or the droop may be reversed to shift the control point upward as the outdoor temperature changes. This is a desirable feature

(Continued on page 60)

<sup>1</sup> Droop—Since the thermostat must sense a drop in room temperature to open a valve, the controlling temperature will be slightly lower with the valve fully open than with the valve fully closed. The amount of droop is equal to the number of degrees of control point shift as the valve is operated through its full stroke.

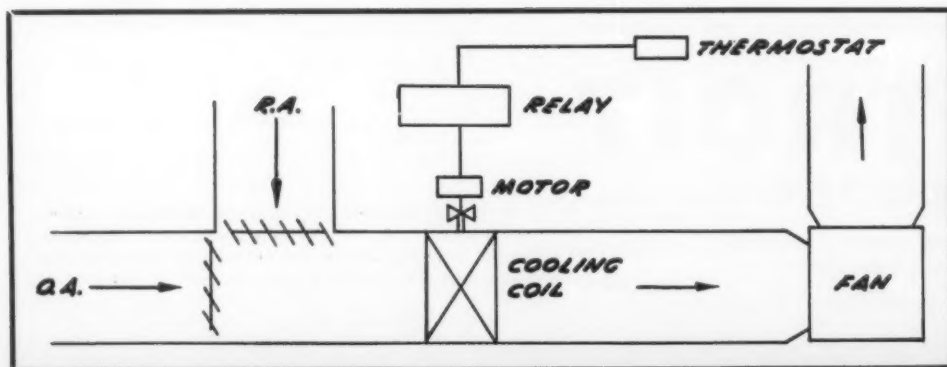


FIGURE  
4

FIGURE  
5

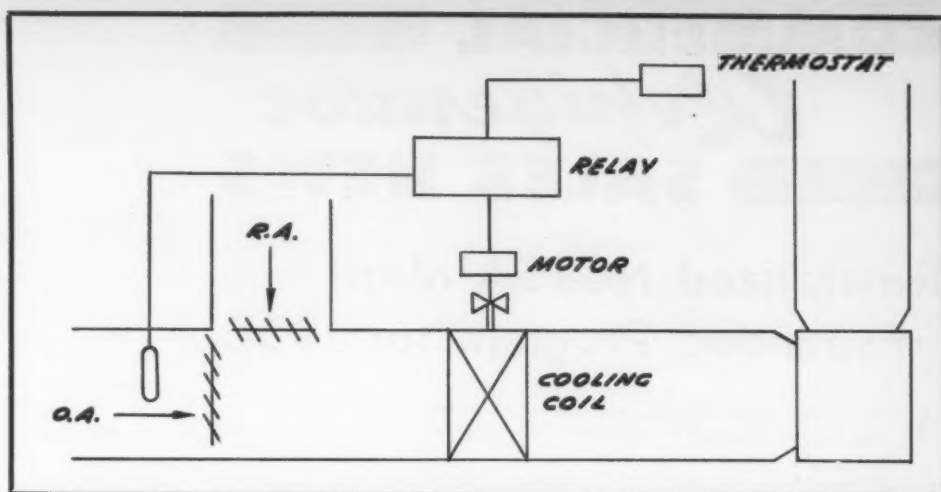


FIGURE  
5A

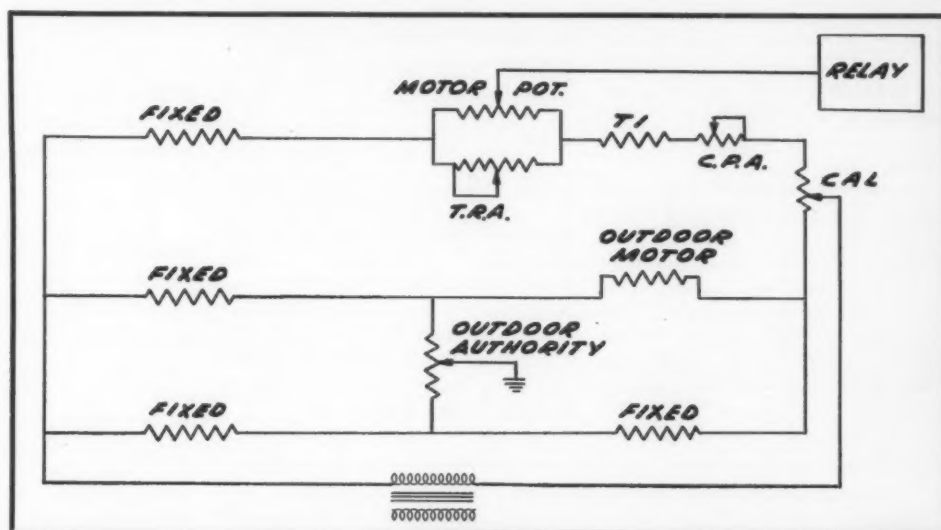


FIGURE  
6

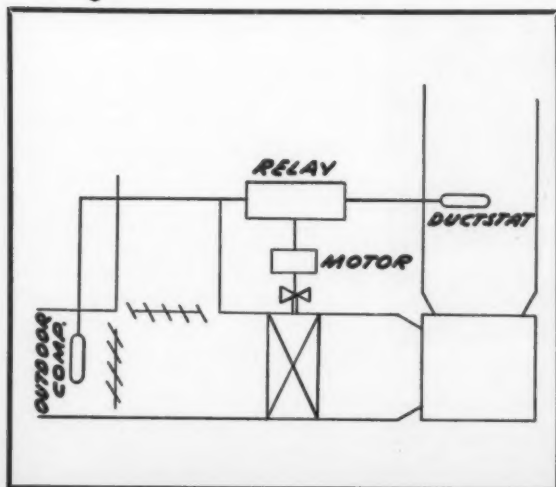
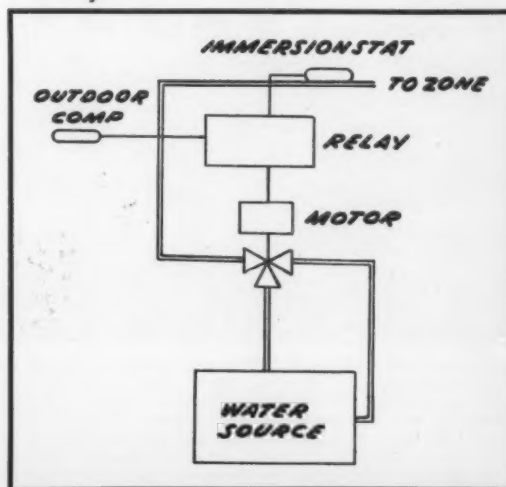


FIGURE  
7



# COMMERCIAL *Refrigerator* SALES NEWS

## Revitalized NCRSA Maps Expanded Program for 1950

**A**N important step forward was taken by the National Commercial Refrigerator Sales Association with the announcement at its third annual meeting, held Nov. 15 in Atlantic City, N. J., in conjunction with the 6th All-Industry Show, that the association management firm of Fernley & Fernley, of Philadelphia, had been engaged to handle the association's activities on a professional basis.

National headquarters of the association have been transferred to the Fernley offices at 505 Arch St., Philadelphia 6, Pa. The Fernley organization, which has been serving some trade associations continually for more than 60 years, has placed the following staff at the service of NCRSA: advisory secretaries, George A. Fernley and Thomas A. Fernley, Jr.; executive secretary, Marie H.

Lawton; secretary, R. Bruce Wall.

New officers and directors also were elected by NCRSA to direct the association's revitalized and expanded program for the coming year. New president of the group is C. S. White, Modernized Equipment Co., Cincinnati, Ohio; vice president is I. Rosenberg, Refrigeration Equipment Co., Pittsburgh, Pa.; secretary-treasurer is Frank D. Stella, F. D. Stella Products Co., Detroit, Mich.

The following association members were unanimously elected as new directors: Simon Heselov, Store Engineering Co., Youngstown, Ohio; John Poth, A. C. Wicke Mfg. Co., New York, N. Y.; George Wiedemer, Cable-Wiedemer, Inc., Rochester, N. Y.; Burnett Berch, Schulz Associated Co., Long Island City, N. Y.; Robert Weston, Weston Sales & Service Co., Pittsburgh, Pa.; J. A. LeGasse, J. A.

LeGasse Refrigeration Co., Boston, Mass.; Richard E. Rudolph, Super-Cold of N. Y., Philadelphia, Pa.

A number of constructive ideas on various phases of commercial refrigeration dealer operations were presented in a series of panel discussions which featured the meeting's educational sessions. Panel topics and discussion leaders were as follows:

"The Future of Refrigeration Dealerships"—Irving Shell, Lee-Shell Co., Chicago, Ill.; Harry Culbertson, McCray Refrigeration Co., Jackson Heights, N. Y.

"Refrigerator Industry Evils and Dealer Grievances"—Arthur Z. Smythe, Hill-Philadelphia Co., Philadelphia, Pa.

"Direct Sales by Manufacturers at Dealer Prices"—W. C. Bader, Bader Supply Co., Tulsa, Okla.; H. A. Hattenbach, Hattenbach & Son Co., Cleveland, Ohio; Joseph S. Lipack, Super-Cold Corp., Long Island City, N. Y.

"How to Organize Local Dealer Groups for Mutual Welfare and to Reduce Unfair Trade Practices"—C. S. White and J. A. LeGasse.

"How to Develop Good Labor Relations Policies that Gain Cooperation of Unions and Build Good Will"—I. Rosenberg and Frank D. Stella.

### Annual Dues Set At \$60

At the organization's business meeting, an amendment to the NCRSA constitution was unanimously adopted providing for annual dues of \$60 per year for all active members commencing Jan. 1, 1950.

More than 100 association members and guests were in attendance at the group's annual banquet. Many leading manufacturers of commercial refrigeration equipment were represented.

Principal banquet address was made by William Stelplflug, vice president of Hussmann Refrigeration, Inc., who gave his listeners some pointed suggestions on "How to be a Successful Dealer".

Pointing out that "the only thing you're interested in is making a profit", Stelplflug urged dealers to cooperate with their association in every way possible. "If the industry is good enough to live with," he declared, "it is good enough to support."

Robert Tebeau of the Business Information Division of Dun & Brad-

(Continued on page 74)

### THESE MEN WILL GUIDE NCRSA's 1950 ACTIVITIES



New officers and directors of NCRSA pose following their election during the association's third annual meeting. Front row, left to right: S. Heselov, Youngstown, Ohio; I. Rosenberg, vice president, Pittsburgh; C. S. White, president, Cincinnati; Burnett Berch, Long Island City, N. Y.; Joseph S. Lipack, Long Island City; W. C. Bader, former president, Tulsa, Okla.; Russ Maintain, immediate past president and chairman of the board, Boston. Rear row, left to right: F. D. Stella, secretary-treasurer, Detroit; J. A. LeGasse, Boston; R. E. Rudolph, Philadelphia; John Poth, New York City; Irving Shell, Chicago.





***NOW—  
single-coil  
cartons***

## **for easier handling . . . for greater protection**

Right now, from your regular source of supply, you can get ANACONDA Copper Refrigeration Tube in standard 50-foot lengths in single-coil cartons—or in master cartons which contain 4 to 30 coils, depending on size.

The tube itself is the same high quality you've known for so long:

- 1 Mirror-Smooth—with a clean, bright interior that makes solid seats.**

- 2 Uniformly Soft—for easy bending and flaring.**

- 3 Thoroughly Dehydrated—exceeds even A.S.R.E. requirements.**

- 4 Cup-Sealed—for maximum protection, minimum waste.**

Ask for ANACONDA Refrigeration Tube by name—for refrigeration, air conditioning and general use.

Made by The American Brass Company, French Small Tube Branch, Waterbury 20, Connecticut. Sold in Canada by Anaconda American Brass, Ltd., New Toronto, Ontario.

45396

**For dependability use** **ANACONDA**  
**REFRIGERATION TUBE**



*corner grocer*  
**Corner grocer George Anderson deposits quarter in one of meters controlling cases he is buying.**



**Collector for refrigeration firm removes coin box from meter at month's end to tabulate payment.**

## **Day-to-day payments of meter selling plan help**

# **Little Prospect**

**C** OIN meter merchandising, that "painless" method of gearing commercial refrigeration equipment payments to the day-to-day economic pace of the small merchant, is providing a welcome sales stimulus for one west coast distributor who is using this plan exclusively to ring up new sales records for this type of equipment.

Silver-Stahl Corp., San Francisco distributor for Super-Cold and other lines of commercial refrigeration equipment, does virtually 100% of its selling on the meter plan. Nat Silverstone, president of this firm, really is one of the pioneers of meter-plan merchandising, having set up his first coin collection system for a Los Angeles department store in 1931.

A couple of years later, George R.

Lindahl Sr., then vice president and general manager of Super-Cold Corp., Los Angeles manufacturer of commercial refrigeration equipment, introduced the meter plan on a nationwide basis.

Super-Cold still uses this sales system through its 17 company-owned distributorships and such affiliated outlets as the Silver-Stahl organization. As a result, Super-Cold's sales for the first nine months of 1949 ran \$1,300,000 ahead of sales for the same period of the previous year, despite the fact that the national average was down some 11% for that same period. That million-dollar-plus increase represented a 40% boost in the company's sales—and the meter plan did it!

Business of the 17 company-owned

Super-Cold distributors is running an estimated two to three times that of non-meter-plan distributors, taking into full consideration such factors as inequalities in territory potential and sales organizations.

Following the same pattern, Silver-Stahl's business last year was up an estimated 50% over what it would have been without the meter plan—likewise a sharp contrast to the downward trend of national averages.

Let's see how the meter plan works in action, on a day-to-day basis—for that, after all, is the psychological reason for its success. The meter plan is geared to the same day-to-day economic pace as the small independent merchant.

The independent grocer, for instance, makes his money on small,



*collector*  
*which*  
*which*  
Collector dumps coins into machine which automatically counts and traps them in a few minutes time.



Grocer Anderson smiles as he signs a receipt—not a bill—presented by collector. Overages are refunded.

## *Become* Big Customers

day-to-day sales. He thinks day-to-day. It is natural that he thinks of the meter plan as a part of this same economic pace—day-to-day, pay-as-you-go.

During the war the meter plan lay dormant, for the most part, both because of the scarcity of coin meters and commercial refrigeration equipment and also because in lush, easy-money times the day-to-day payment feature of the meter plan loses much of its appeal to the average merchant.

This frank admittance that meter-plan selling is most effective when times are toughest leads many distributors to ask if there isn't a heavy credit risk involved in this type of operation. Best answer to this is the fact that since last March, when the Silver-Stahl organization again began

plugging the meter plan "in a big way", the company has had to pick up only three commercial refrigeration installations because of non-payment. Two of these instances involved reasons other than customer bankruptcy. "As this record indicates," company officials state, "the percentage of pick-ups is practically nil."

Significantly, Nat Silverstone emphasizes that "we use the meter plan as a sales tool, and relegate its collection function to secondary importance." Sales come first—using the Silver-Stahl "Meter Profit Plan" as a lever. That monthly collections are economically stable and advantageous is a secondary consideration—something which naturally interests the company internally, but

which has no place in the sales message.

Silver-Stahl has two retail branches—one in Oakland, the other in San Francisco—each headed by a retail sales-manager and assistant. A total of twenty salesmen work out of both offices. Here, any similarity to a non-meter-plan sales forces ends.

Every one of Silver-Stahl's twenty salesmen know but one system of sales—the meter plan. If a prospective customer says he'd like to pay cash, or use something other than the meter-plan system, the salesman refers the case to the sales manager.

Specialization in salesmanship, geared to selling via the meter plan, has brought increased sales—but it also points up one of the biggest hazards that users of the plan face.

Salesmen schooled in meter-plan selling sometimes begin to "sell terms" and not to "sell on terms." This means that the salesman's approach ceases to be based upon merchandise quality, but begins and ends with the easy payment terms—a sort of "the payments are so small you can afford to take a chance" technique.

Falling into this habit of "selling terms" instead of "selling on terms" constantly plagues the system. George R. Lindahl, Jr., vice-president and general manager of Super-Cold, is

quick to point out this hazard. Lindahl says that the meter plan's pay-as-you-go feature is a big sales point, of course, but that merchandise quality must be equally stressed.

Even more advantageous than the pay-as-you-go element is the system's customer-contact feature, a natural consequence of the 24 monthly collection calls during the usual two-year contract period. Along with the monthly collection periods, Silver-Stahl also guarantees two years' service.

The customer-contact relationship

has in many instances resulted in a meter remaining in a store for years—sometimes as long as 10 years, in fact—while one new piece of refrigeration equipment followed another, all on the meter plan.

The meter-plan saving habit is contagious; it often lasts long after the refrigeration unit is paid for. Super-Cold has, on occasion, sold meters outright to its customers for use as savings banks.

### Repeated Contact Important

As Charles Elder, Silver-Stahl's manager of collections, says: "We see our customers once a month for two full years. Other distributors may never again have personal contact with their customers after installation of refrigeration equipment.

"When you visit a customer's store personally, you become an interested friend. This close customer relationship is a great sales factor, as repeated sales have proved. Since the refrigeration firm's collector visits the store every month, it's only natural that when new equipment is bought, it will be purchased from the meter-plan firm."

The most important single man in the meter-plan organization is the collector. He's the one who contacts the customer every month for two years. The salesman may have a winning personality and make the sale, but future sales—and customer harmony—rests almost entirely with the collector.

### Personality A 'Must'

He must know how to win friends and keep them. The facade of personality which some salesmen wear for the duration of his demonstration must, with the collector, be real and lasting. The collector usually calls customers by their first names; he reports repairs and servicing needs; he tries to be less a collector and more a company service representative.

There is another advantage to meter-plan selling. No matter how scarce money is, the first creditor paid is the meter—or else the refrigeration shuts off. About the only way a meter-plan sales organization can lose is if a business which it services goes bankrupt. As long as the customer is open for business,

(Continued on page 48)

## HOW WOULD YOU SELL REFRIGERATION TO THE PROSPECT WHO SAYS

I NEED NEW  
EQUIPMENT  
BUT I DON'T HAVE  
THE MONEY  
FOR IT

He is in the habit of paying his suppliers daily...



As a result, at the end of the month there is not enough left to pay large, down payments and lump sum monthly payments.

## Your Answer Is THE METER PLAN

### OF DAILY SAVINGS

Your Customer  
Deposits  
Just a Few  
Quarters  
a Day.



### METER-MATIC COIN METERS ARE:

- LOW IN PRICE
- SIMPLE TO INSTALL
- FULLY GUARANTEED



Meter-Matic DM6 Meter  
Two Door Case

MAIL  
THIS  
COUPON  
TODAY

INTERNATIONAL REGISTER CO.  
2626 W. Washington Blvd.  
Dept. 79-M, Chicago 12, Ill.

Please send me FREE: ☐ Meter Catalog  
☐ Meter Plan for Selling Commercial Refrigeration.

Company..... Name.....  
Address.....  
City..... Zone..... State.....



# REFRIGERATION INDUSTRY *News*

## COURT HOLDS DISPLAY CASE PATENTS INVALID

Patent restrictions on the manufacture of a new-type open self-contained refrigerated food display case were ordered removed in a decision by U. S. District Judge John H. Druffel, Cincinnati.

Judge Druffel made the decision in the case of C. V. Hill & Co., Inc. against the Royal Store Equipment Distributors of Cincinnati and the Weber Showcase & Fixture Co., Inc., of Los Angeles.

The court dismissed the complaint, finding that all patents involved were invalid because they "lacked invention over the prior art". Court officials said the action meant that such display cases now may be manufactured by anyone, free of restriction or royalty payments.

## MINN. SHOWCASE MOVES PLANT TO NEW RICHMOND, WIS.

Minneapolis Showcase and Fixture Co. has recently moved its plant and office from Minneapolis to New Richmond, Wis.

In the new location, the showcase firm has taken over the complete facilities of the large, modern building which formerly housed the Strand Ski Co.. The move gives the makers of Sterling commercial refrigerators greatly enlarged quarters for their manufacturing activities and will accommodate their rapidly increasing production operations.

## GETS FREEZER POST

Nicholas A. Massello has been appointed acting production head of the freezer section, refrigerator division, Erie Works of General Electric Co. He joined G-E in 1935 and has been in the freezer section since 1945.

## PACKAGED COOLING IS PART OF THE SHOW



Outstanding example of how the larger sizes of packaged air conditioning units can be applied to theater air conditioning is this installation in the Rivoli Theater, Rutherford, N.J. This theater, which seats 1600 persons, was equipped with eight 10-ton Typhoon units. Installation, requiring only electric, water, and drain connections, was accomplished during off hours with no loss in box office receipts. Units encased in attractive cabinets, are placed in plain sight along the sides of the theater.

## ED MARSDEN HEADS REWA FOR 1950

E. C. Marsden of Marsden & Wasserman, Inc., Hartford, Conn., was elected president of Refrigeration Equipment Wholesalers Association for 1950 at that group's annual meeting held in Atlantic City in conjunction with the 6th All-Industry Refrigeration and Air Conditioning Exposition.

J. P. Glass, Chase Refrigeration Supply, Chicago, is the new REWA vice president; Fred B. Wilson, Standard Brass & Mfg. Co., Beaumont, Tex., is secretary; and C. W. Eskridge, Henry V. Dick & Co., Inc., Charlotte, N. C., is treasurer.

Two new directors also were elected by the wholesalers' organization. Ned Mason of Mason Supply Co., Columbus, Ohio, was named to replace H. W. Holt as director from Region No. 5. Merle Stutzman, Refrigeration Supplies Distributor, Los Angeles, was named to replace N. W. Edwards as director from Region No. 9.

## ALL COLDSPOT PRODUCTION NOW IN EVANSVILLE

Completion of a multi-million dollar program to concentrate production of Sears, Roebuck & Co.'s Coldspot refrigerator in Evansville, Ind., has been announced by Seeger Refrigerator Co.

The company now claims that its 750,000 sq. ft. plant in Evansville is the largest in the world devoted exclusively to the manufacture of household refrigerators.

Seeger formerly made some Coldspot cabinets in its plant in St. Paul, Minn. Now all cabinets, units and parts are produced and assembled in Evansville.

A two-story warehouse for the storage of both raw materials and finished products is now under construction. The company expects this building to help level out the employment curve since it will allow storage of refrigerators produced in the "slow" season for distribution when demand picks up.

## ROBERTSON BUYS UNIVERSAL COOLER CO. OF CANADA

C. Russell Feldman, chairman of the board of Newport Steel Corp., has announced the sale of its wholly owned subsidiary, Universal Cooler Co. Ltd. of Canada, to Dan Robertson, president of the Canadian company, which is located at Brantford, Ont.

Robertson who also has been general manager of the Universal Cooler Div. of Newport Steel, Marion, Ohio, manufacturer of condensing units, will continue in that capacity, it was announced. He has been president of the Canadian firm since 1933 and general manager of the U. S. organization since 1947.

There will be no change in the manufacturing and sales policies and personnel of either the Canadian or U. S. Universal Cooler organizations, Robertson stated.

## DEEFPREEZE SHOWS NEW REFRIGERATOR

Deepfreeze Div. of Motor Products Corp. has entered the electric refrigerator, electric range, and electric water heater fields.

In addition, a new model home freezer was announced, "The Sweet Sixteen", giving Deepfreeze a complete line of six models.

Three hundred distributors attending the 1950 national sales conference at the Drake Hotel, Chicago, saw the new models as they were unveiled. In a two-day meeting complete sales and advertising programs were discussed.

## FREEZER PRICE CUT

A price reduction of \$30 on the 10 cu. ft. Amana chest type freezer Model 110 was announced recently by the Amana Society's refrigeration division. New suggested list price is \$339.50, compared with a former price of \$369.95.

## L & H PRODUCING REFRIGERATOR LINE

A. J. Lindemann & Hoverson Co., Milwaukee, manufacturer of home appliances, has added two new products to be merchandised under the "Lectro-Host" trade name—electric refrigerators and home freezers.

Refrigerator line comprises five models ranging from 7½ to 9 cu. ft. capacity. Delivery of refrigerators to dealers was reportedly started in November, with freezer deliveries to begin after Jan. 1.

Both lines are being manufactured for the company by an established maker of refrigeration equipment, it is reported.

## TEKNI-CRAFT TO SHOW LIST PRICES

In a department from previous practices in the counter freezer field, Tekni-Craft, Beloit, Wis., has adopted a policy of announcing list prices on its 1950 freezer models.

According to Charlie Shaw, public relations partner, Tekni-Craft's policy of advertising prices is new to the freezer industry. Previously, he said, prices have been quoted only by distributors, and this is still the practice with other manufacturers.

Tekni-Craft is taking the move for the protection of purchasers, Shaw said, and will display prices in advertising and literature. The company's 1950 line comprises seven models, one with a combination mix and

## HAPPY ABOUT THE WHOLE THING



Pleased with the success of the 6th All-Industry Show are these four men, all of whom have helped in the management of these expositions as presidents of REMA. Left to right are K. B. Thorndike, current REMA head, and H. F. Hildreth, Hermann F. Spoehrer, and E. M. Flannery, past presidents. (Photo is by Irving Alter.)

hardening cabinet, with f.o.b. factory prices ranging from \$898 for the 6-quart freezer to \$2498 for a model equipped with two 10-quart freezers.

## FREEZER FIRM OPENS CANADIAN PLANT

Sweden Freezer Mfg. Co., maker of soft ice cream machines, announces the opening of a branch plant in Vancouver, B.C. This marks the firm's return to Canadian production of Sweden Speed Freezers which was halted during the war.

Utilizing Canadian labor and materials, the plant will supply the expanding Canadian market with this direct - from - the - freezer equipment. With a number of dealers already established in Canada, Sweden has a nucleus around which

to build an expanded dealer organization.

First models coming from the new plant are Model 1-131, the double-head freezer that gives continuous ice cream production at the rate of about 16 Imperial gallons per hour. As the program develops, the other single and double-head models will be added to the production schedule, until the complete line is available from the Canadian plant.

A. A. Baudat, manufacturing manager of the firm, is in charge of setting up the Canadian plant. He has been in Vancouver during the initial production period to personally handle the many problems and details of the new operation. For the present, marketing programs for Canadian distributors are being directed from the general offices in Seattle.

## G-E HEATING MEN HOLD CONFERENCE

"Back to Davenport Selling" was the theme of a recent week-long intensive sales training conference sponsored by the automatic heating division of General Electric Co., Bloomfield, N. J., for all of its field heating representatives.

The program included a conference session on effective sales presentations, conducted by Dr. Alvin C. Busse, associate professor, School of Business Administration, New York University; a conference leadership course, conducted by Earle C. Bruner of Gus Campbell Associates; and a talk on the effective use of visual aids by X. F. Sutton, president of Sutton Associates.

Other speakers included Harold F. Smiddy, vice president of General Electric and general manager of its air conditioning department; H. B. Donley, manager of marketing; H. M. Brundage, manager of the automatic heating division; H. J. Wines, manager of heating sales; E. S. McKay, manager of advertising, sales promotion and sales training.

## CANADIAN ASSEMBLY

Establishment of a new Servel assembly plant at Amherst, Nova Scotia, Canada, was announced recently by W. Paul Jones, president and general manager of Servel, Inc. The plant will be operated by Canadian Assemblies, Ltd., and presumably will turn out gas refrigerators only.

## NEW HEADQUARTERS OFFICES OF BOSTON REFRIGERATION WHOLESALER



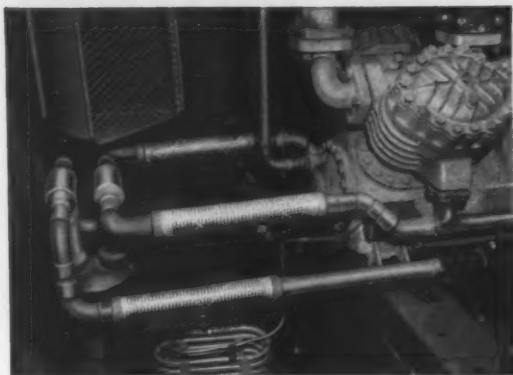
Shown above are the spacious, well lighted general offices of A. E. Borden Co., Boston refrigeration parts wholesaler.

# Another Problem **SOLVED**

ELIMINATING COMPRESSOR VIBRATION WITH

## **Bendix** Eclipse Flexible Metal Hose

Twenty-four-hour operation of a huge icebox for cold testing (to  $-83^{\circ}$  F.) aircraft instruments, plays a vital role in maintaining the supply line to today's multi-engined and supersonic aircraft. Greater assurance of a continuous duty refrigerating plant was given with the installation of Bendix Vibration Reducers for absorbing compressor vibration. Manufactured from seamless drawn tubing, the deep parallel corrugations and uniform wall thickness assure maximum flexibility and service life. Bendix Vibration Reducers in



standard sizes—all chemically cleaned and sealed—are available from stock. Special assemblies can be engineered to your requirements. Write today and let our engineers work out your problem with you.

LOOK FOR THE  MARK OF QUALITY

**ECLIPSE-PIONEER DIVISION**  
**BENDIX AVIATION CORPORATION**  
TETERBORO, NEW JERSEY



Canadian Representative: The Holden Co., Ltd., 814 St. James Street, West Montreal 3, Canada

Diagram showing  
new nozzleless  
water distribution  
system

## Quiet...



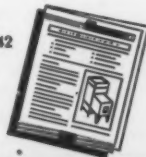
## a NEW type cooling tower

for use with "packaged" water-cooled  
air conditioning and refrigeration systems

A new type of water distribution system eliminates the use of spray nozzles in Binks Type E blower-type cooling towers. Distinguished by extremely quiet operation and high efficiency, these towers are ideal for use with "packaged," water-cooled air conditioning and refrigeration condensing units, such as are installed in small businesses and residences. Installations may be either outdoors or indoors.

- All galvanized steel construction
- Capacities up to 36 tons
- Attractively priced
- Easily installed
- No internal piping
- Low pumping head
- Shipped assembled
- Low operating cost

Write today for  
Binks Bulletin No. 42  
which includes  
complete data on  
all 30 Type E  
cooling towers.



Binks Type E  
Induced Draft  
Cooling Tower

30 Standard Sizes

THERE'S A BINKS SPRAY NOZZLE  
FOR EVERY SPRAY JOB

## Binks

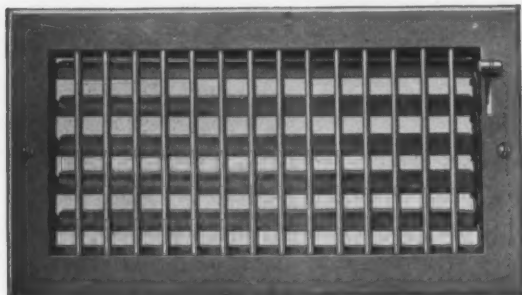
MANUFACTURING COMPANY

REPRESENTATIVES IN ALL PRINCIPAL CITIES ■ 3124-38 CARROLL AVENUE, CHICAGO, ILL.

# "AUER" Streamliner

## REGISTERS and GRILLES

—for high velocity Systems of  
AIR CONDITIONING AND COOLING



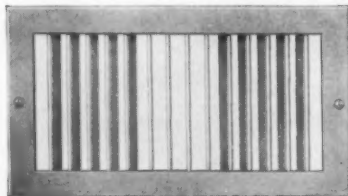
No. 1005V-HML. Single bank of adjustable bars, multi-louvre valve.

Streamliner wall registers and grilles afford a wide range of multiple deflection for air conditioning, ventilating, or cooling systems. They provide correct diffusion for high velocity outlets.

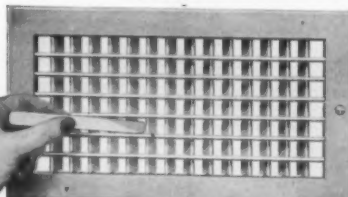
Bars are hollow moulded, beveled, perfectly formed, and smooth in contour. They are pivoted in the frame on special split sleeves, or expansion inserts, which furnish proper tension to hold bars firmly when set, yet allow easy adjustment to the desired angle with one simple tool. Bars are shaped like an airplane wing in cross-section, and pivoted at the exact center, so they can be turned completely around. Some users prefer to turn the thin edge outward for outlets (and the broader edge toward the flow of air) cutting resistance and turbulence to a minimum. Bars may be set at any angle, in any grouping. Shutters of multi-louvre valves are pivoted on rivets to prevent vibration. All Streamliner registers are equipped with gaskets. Write for Folder S-49 with sizes and list prices.

### 8 MODELS

The Series includes models with single bank of adjustable bars (vertical or horizontal), also with double bank of adjustable bars (vertical in front and horizontal in back, or the reverse), also all above four types with the addition of horizontal multi-louvre valves in the rear, controlled by lever on face of register.



No. 1005V. Single bank of adjustable bars, no valve.



No. 1205HV. Double bank of adjustable bars, no valve.

Order from your Jobber. Complete Auer Register Book—our Catalog "G" on perforated grilles—sent on request.

THE AUER REGISTER CO., 3608 Payne Avenue, CLEVELAND 14, OHIO

**Auer** **REGISTERS**  
& GRILLES for AIR CONDITIONING & GRAVITY

### USAIRCO TO SELL DIRECT TO DEALER; EXTENDS WARRANTIES

Warranties from one to five years for popular types of air conditioners, described as "the most complete and generous ever offered on a piece of air conditioning equipment" have been announced today by A. A. Feinberg, president, United States Air Conditioning Corp.

Feinberg also has announced a direct-to-dealer merchandising program, designed to increase profits to dealers and at the same time providing sales, engineering and financing assistance.

"The one year warranty," Feinberg said, "applies to the window room conditioner, the store conditioner and the console room conditioner guaranteeing them to be free of defects in material and workmanship under normal use and service.

"Unique features of this warranty are the payment of shipping charges on returned parts and replacements and the payment of service charges for the installation of replacement parts."

In addition to the one-year warranty, the company warrants to the original user that it will replace the hermetically sealed compressor with similar or interchangeable parts of the same capacity at any time during the four years following the first year general warranty period, if the sealed-in compressor does not operate in reasonable manner under normal use due to defects in factory workmanship or material of the compressor.

Feinberg pointed out that the object of the direct-to-dealer program is to bring to the air conditioning dealer the benefits of a franchised association with the manufacturer. He explained:

"Elimination of the usual distributor means larger discounts to the dealer. Engineering and sales counsel will be supplied by the manufacturer through its many field representatives.

"Two methods of financing will ease the financial burden on the dealer. The first method allows the dealer to make a small

down-payment for equipment shipped now, and pay the balance at the start of the next selling season, April 1st. The second plan enables the dealer to sell his customers equipment on the installment plan. Usairco will handle this financing.

"Dealers will be given protected territories in which to operate. Cooperative advertising will allow the dealer to engage in newspaper promotion at half the usual cost."

### ARMSTRONG HAS 1st POST-WAR MEETING

Over 100 men comprising the industrial insulation field sales organization of Armstrong Cork Co. were brought to the company's home office in Lancaster, Pa., recently to attend the first general meeting of the group since the war.

In the sessions designed to bring Armstrong's insulation field men up to date, presentations were made on the company's objectives, products, sales, advertising and promotion, manufacturing and research activities. Sound slide films, exhibits, demonstrations and reports by company executives were utilized.

H. R. Peck, vice president and general manager of the building materials division, was chairman of the meeting.

Several projected developments in both the high and low temperature insulation fields were outlined to the Armstrong representatives. Also announced and demonstrated at the meeting were some of the developments of Armstrong's tool research program. Since the war continuing studies have been made of various kinds of tools that will result in reductions in the costs and improvements in the installation of insulations.

A new sales promotion sound slide film, "Insulation Enemy Number One," the story of low-temperature insulation and the fight against moisture, was previewed by the representatives. Copies of the film will be distributed to all Armstrong's district offices.



## **THE WORLD'S**

leading appliance manufacturers are listed among Grand Rapids Brass customers. Because in building the

## **FINEST**

products, in terms of quality and value, it is only natural that they select hardware for their

## **APPLIANCES**

that will continue to look like new and function perfectly through long years of service — hardware which will

## **HAVE**

such customer-attracting features as smart, modern designs, beautiful chrome-plated finishes, and locks with "Living Action" which assure easy dependable operation.

## **GRAND RAPIDS BRASS**

will be glad to estimate your needs in commercial, domestic refrigeration hardware, stove hardware and nameplates for all kinds of appliances . . .

## **HARDWARE**

that will give you and your customers assurance of satisfaction, outstanding quality and workmanship.

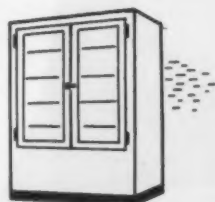
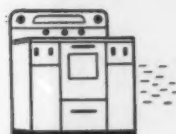
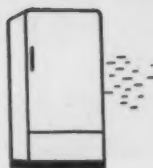
Manufacturers of hardware for COMMERCIAL REFRIGERATORS, DOMESTIC REFRIGERATORS, GAS STOVES, WASHING MACHINES, ELECTRIC RANGES

DIVISION OF CRAMPTON MANUFACTURING COMPANY

*Grand Rapids Brass*

C O M P A N Y

GRAND RAPIDS 4, MICHIGAN



## A large, heavy-duty metal safe with its top door open, revealing multiple interior drawers and compartments. The safe is labeled "MILITARY" on the inside of the door.

**The outstanding open display cabinet that sells on sight. Moderate price. Superb quality. Sub zero temperature. Capacity 480 standard packages. Many exclusive features.**

**2869 East Grand Blvd.  
DETROIT 2, MICH.**

## Continued from page 42

Silver-Stahl's sales talk goes something like this: "All this piece of refrigeration equipment costs you is your first quarter to get it going." The explanation follows that you pay for the machine out of additional profit at month's end—profit made possible by new equipment, and subsequent impulse sales. This sales argument has been proved valid on many occasions.

Since last May, Diamond Grocery has bought four more major pieces of commercial refrigeration equipment—a vegetable unit, a reach-in box, a deep freeze, and a meat coun-

Every month Silver-Stahl's Charles Elder, stops by to collect from Diamond Grocery. And every month Elder has a chance to see how the equipment is working, to make friends for the company. This a good reason why special care must be taken with meter-plan collectors. In 24 calls over the payment period, his personality can either make a friend—and thus a customer—or lose one.

Elder has established a definite daily route; his collection calls thus are precisely regular. This is important, because sometimes a small

[illegible]

customer will fall behind in payments a day, but if he knows exactly when Elder will call he may be able to make up the difference and save himself some embarrassment.

Some days Elder's route take him across the Bay to Oakland and 30 miles out to Walnut Creek. Once a month his route extends down the peninsula some 30 miles to Palo Alto. Silver-Stahl has a few chain-store customers, but mostly they're the independents—the little guys.

Elder has a "meter-plan collection record" for each installation, each filed by route number and collection day. On it are listed all meter-plan units installed, with some customers have as many as six commercial refrigeration units operating under the meter plan.

A separate section lists "terms,"

**for time payment selling  
of COMMERCIAL EQUIPMENT**

**SIMPLE TIME SETTING**—If a change of daily charge is desired, it's done in a minute. Only a screw driver is needed to shift studs in 12 hole cam. No parts to store. Anyone can do it.

**JAM PROOF**—No second coin can enter until first is cleared. Eliminates troublesome emergency service calls.

**DELINQUENCY FEATURE PROVIDED**

**110 and 220 VOLT MODELS AVAILABLE**  
Send for sample today

110 volt model.....	\$15.95
220 volt model.....	\$16.95

**F.O.B. New York Factory**

**Wm. J. Doherty, Inc.** 70 East 43th St. — New York 17

Gentlemen:

We're interested in further information. Send us a sample ROBCO Commercial COLLECTOMETER.

Name .....

Company .....

Address..... City..... State.....

49

when the call is for  
**CONTROLS**  
you'll find the answer



**HERE**  
Bigger, Better,  
General Controls  
Catalog now ready  
—reserve your copy!

104 pages covering the complete General Controls line of Automatic Pressure, Temperature, Level and Flow controls. It charts, tabulates and details, capacities, pressures, dimensions and specifications of hundreds of controls. Whatever the product or process—in heating, refrigeration, aircraft or industry, there's a better General Control for the job. General Controls do more and cost less. The new Catalog tells how and why. Send for your copy today.

**GENERAL CONTROLS**  
817 Allen Ave., Glendale 1, Calif.

### GENERAL CONTROLS

Automatic Pressure, Temperature, Level and Flow Controls

FACTORY BRANCHES: Baltimore (5), Birmingham (3), Boston (16), Buffalo (3), Chicago (5), Cincinnati (2), Cleveland (15), Dallas (1), Denver (4), Detroit (8), Glendale (1), Houston (6), Kansas City (2), New York (17), Minneapolis (2), Philadelphia (40), Pittsburgh (22), San Francisco (7), Seattle (1), St. Louis (12), Tulsa (6). DISTRICT MANAGERS IN PRINCIPAL CITIES

**Why Freeze Yourself  
Out of Extra Profits?**



### INSTALL COMPLETE FOOD STORES

Now you can figure complete jobs with Hirsch Standard Shelf Equipment! The Hirsch Plan enables you to sell shelving and equipment that the merchant can assemble himself.

- ★ EASY TO INSTALL
- ★ FULLY ADJUSTABLE
- ★ HEAVY DUTY CONSTRUCTION
- ★ PROFITABLE FOR YOU



Write now for complete information—no obligation.

**S. A. HIRSH MFG. CO.**

3119 West Lake Street  
Chicago 12, Ill. Phone SAcramento 3-3545

\*CMR

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_



## LITERATURE

The publications listed below are available to readers without charge. Simply list on the postcard in this issue the key numbers of the items you wish to receive. Your requests will be forwarded directly to the companies concerned.

**A1—Engineering Data . . .** A 36-page book available from Drayer-Hanson, Inc., giving complete engineering information on the company's new line of extended surface for air conditioning.

**A2—Soldering Products . . .** A new catalog available from P. Wall Mfg. Co. illustrating and describing the complete line of soldering products made by that company. Included are gasoline and kerosene blow torches, self-generating alcohol blow torches, electric soldering irons, solder, etc.

**A3—Spray Nozzles . . .** A bulletin (No. 20) available from Binks Mfg. Co. describing the new line of industrial spray nozzles produced by it. Table lists capacities in gallons per hour and gallons per minute for each size at stated pressures from 5 to 100 lb. per sq. in. Details of nozzle construction also shown.

**A4—Business Builders . . .** A booklet available from Gates Rubber Co. called "Over 100 Ideas Successful Service Engineers Are Using to Build Business". Tells how to prepare telephone book and newspaper ads, how to build a mailing list, how to get repeat business, etc.

**A5—Pressure Switch . . .** Issue No. 10 of the "Cook Diaphlex Newsletter" describing the Hydrol medium pressure switch. Outlines specifications and requirements that switch is designed to meet. Available from Cook Electric Co.

**A6—Tank Heating and Cooling . . .** A new 6-page bulletin available from Kold-Hold Mfg. Co. describing and illustrating tank heating and cooling. Direct comparison is made between the Platecoil and pipe coil methods of heat exchange, describes advantages of Platecoil in relation to savings of time money and manpower.

**A7—Thermal Insulation Data . . .** A new edition of "Simplified Physics of Thermal Insulation" issued by Infra Insulation, Inc., giving data on heat transfer, vapor and vapor flow, condensation radiant heating and other information on the subject of insulation and insulation values. Booklet has 44 pages, illustrated with photos, charts, diagrams.

**A8—Timing Motor . . .** A bulletin

available from International Register Co. illustrating and describing its new series of self-starting, synchronous timing motors, now offered for use by other manufacturers . . . of products such as time switches, range timers, interval timers, coin meters, flow meters, etc. Bulletin is of interest to equipment manufacturers only.

**A9—Air Diffusers . . .** A new 4-page folder (Bulletin 29) explaining the performance and application of the new square Type E aspirating air diffuser, available from Anemostat Corp. of America. Lists all dimensional data, tells how unit fits into various types of applications.

**A10—Electric Motors . . .** A bulletin (GEA-5401) describing the General Electric Co.'s new Tri-Clad capacitor motor. Describes features, dimensions, ratings and frame sizes, etc. Available from General Electric Co. apparatus dept.

**A11—Bench Shaper . . .** Bulletin No. 500 illustrating and describing the new 7" bench shaper being produced by South Bend Lathe Works. Also shows a 3-drawer steel stand, motors and tools. Prices of all items are listed.

**A12—Impulse Timer . . .** A new catalog sheet featuring the new impulse timer manufactured by Zenith Electric Co. Timer provides impulse circuit for on and off control of exhaust fans, other timing uses.

**A13—Hermetic Seals . . .** A new catalog available from Hermetic Seal Products Co. presenting detailed information on the many types of hermetic seals produced by the company. Covers both standard and custom designed hermetic seals. Of special interest to manufacturers of condensers, transformers, relays, etc.

**A14—Accessories . . .** A 16-page catalog (No. 501) covering the Wabash line of refrigeration products, including a number of items never before listed. Includes driers, strainers, oil separators, floats, capillary tubes, couplers, charging hose, and refrigerant cylinders, plus a new cylinder carrier. Available from Wabash Mfg. Co.

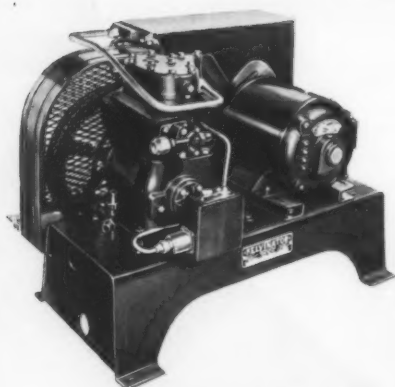
**BUY FROM YOUR  
REFRIGERATION WHOLESALE**



# Kelvinator

—the outcome is income!

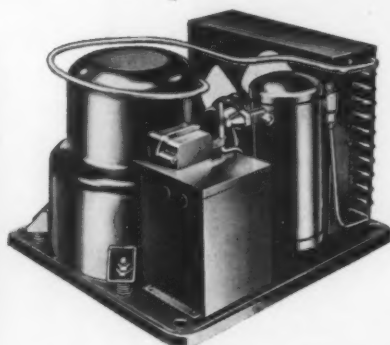
Just total up these basic advantages—trouble-free products . . . competitively priced . . . backed by a name that wins immediate acceptance. Kelvinator gives you all three to keep customers heading your way. Join the ever-increasing group of profit-minded dealers and servicemen who depend on Kelvinator—the name that always *sells*, always *satisfies*! See the items you need at your nearest Kelvinator depot. Write, phone or stop in for helpful information on installation or service problems. Kelvinator, Division of Nash-Kelvinator Corporation, Detroit 32, Michigan.



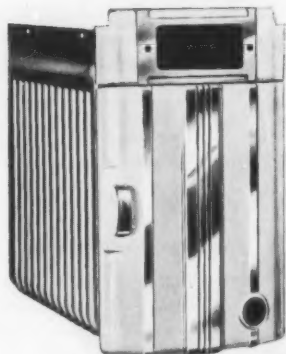
Kelvinator Open Type Condensing Units (1/4 H. P. to 1 H. P.)



Kelvinator Water Coolers  
(Pressure and Bottle Types)



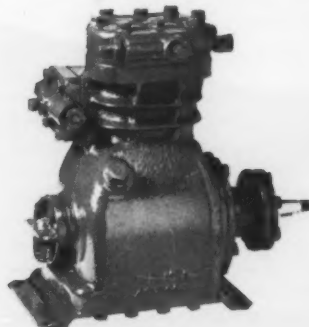
Kelvinator Sealed Type Condensing Units (1/4 H. P. to 1/2 H. P.)



Kelvinator Stainless Steel Evaporators



Kelvinator Silica Gel Driers



Kelvinator Compressors  
(1/6 H. P. to 5 H. P.)

DEPEND ON KELVINATOR FOR ALL YOUR REFRIGERATION NEEDS

# NEW Products

For further information on any of these products, simply list on the postcard provided in this issue the key numbers of the items in which you are interested. Your requests will be forwarded directly to the companies concerned.

## Crushed Ice Maker • • • PA-1

**Product:** "Instant Ice" machine for making crushed ice from fresh or salt water.

**Manufacturer:** Liquid Freeze Corp., Oakland, Calif.



**Features:** Casing made of rust resistant steel-gray baked enamel. Outside made of two side panels and top; back is of expanded metal, removable for inspection of machine. Condensing system uses self-contained two-cylinder heavy duty compressor, water cooled receiver condenser. Unit capacity is up to 2000 lb. ice per day, if inlet water does not exceed 65F. Evaporator is stationary, vertical, hollow steel cylinder, interior of cylinder forming full-flooded evaporator chamber; hollow center tube forms return passage for evaporated gas; liquid refrigerant admitted to evaporator through cylinder base. Make-up water tank is of cast aluminum; water level controlled by float valve. Specially designed ice remover blades are mounted on vertical steel bar attached to revolving water distribution head and follow 25° behind revolving water curtain. Blades fracture ice sheet and remove ice from freezing surface by lifting action. Ice chute is cast integrally with ice collector pan, rotating collector grids provide positive mechanical delivery of ice. Unit dimensions

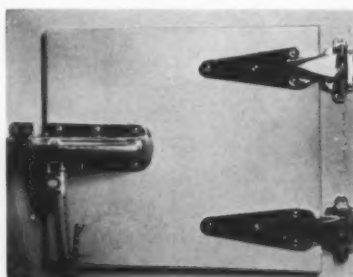
approx. 24" x 36" x 69". Machine pictured above has front panel removed to show working parts.

## Safety Latch • • • • • PA-2

**Product:** Model K-55 safety latch and locking device for low-temperature walk-ins.

**Manufacturer:** Kason Hardware Corp., Brooklyn, N. Y.

**Features:** "Fool-proof" lever-action interior release mechanism which assures easy opening of cooler door from inside the room even



though latch is padlocked on the outside. Latch is pilfer-proof when locked, yet makes it impossible to lock a man into the refrigerated room. Release mechanism is built into exterior portion of latch, so that there is no possibility of emergency release freezing up. This patented safety latch eliminates need for electrical or other signal devices. This new latch includes the regular Kason feature of micrometer adjustment to compensate accurately the door offset.

## Volt-Amp Tester • • • • • PA-3

**Product:** New General purpose volt-ampere checker.

**Manufacturer:** Industrial Devices, Inc., Edgewater, N. J.

**Features:** Unit plugs in between line and connection cord, provides simultaneous voltage and amperage

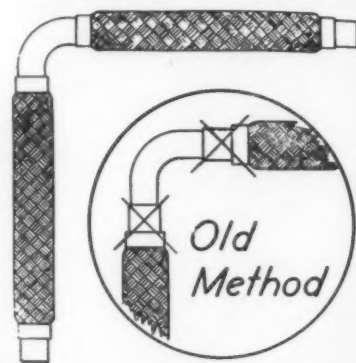
readings directly off two dials. Designed as Model 900, can be safely carried in serviceman's tool bag without damage. Has two neon indicators which extinguish at voltage and amperage readings indicated by adjustable knobs. Multiplying switch provides for expansion of range indicated on ammeter scale. Distinguishes between AC and DC. Intended for 60 cycle AC for accurate amperage readings. Measures 3 3/4 x 6 1/4 x 2", weighs 26 ounces.

## Vibration Eliminator • • PA-4

**Product:** New angle-type bronze braided metal hose vibration eliminator.

**Manufacturer:** Techniflex Corp., Port Jervis, N. Y.

**Features:** Manufactured as unit,



it reduced labor and material costs on installations where compressor manufacturers recommend use of two vibration eliminators at right angles for absorbing vibration and noise. Works effectively on installations where single straight units have been tried unsuccessfully. Available in diameter sizes of 1" and up.

## Display Case • • • • • PA-5

**Product:** "Triple Service" display case, Model CT42.

**Manufacturer:** Jordon Refriger-



ator Co., Inc., Philadelphia.

**Features:** A counter high (42")

# coast-to-coast ...OVER 160 COPELAND PARTS JOBBERS



This nationwide parts distribution program is added proof Copeland gives you and your customers more close cooperation. Genuine Copeland replacement parts are readily available for Copelametic or open-type units.

An authorized parts jobber, located nearby, will serve you promptly. Large inventories are not necessary. Sell Copeland; enjoy practical Copeland service.

**OPEN-TYPE UNITS**  
Valve Plate and Gasket  
Kits,  
Seal Assemblies

**COPELAMETIC**  
Valve Plate and Gasket  
Kits, Fan Motors, Relays,  
Capacitors

Write or Wire for  
Address of Your  
Nearest Jobber

**Copeland**  
DEPENDABLE *Refrigeration*

**COPELAND REFRIGERATION  
CORPORATION**  
SIDNEY, OHIO

Manufacturers of Refrigeration Units (Open Type and Copelametic), Water Coolers, Refrigerators

display case that provides refrigerated display and storage sections, and a work surface top that can be used for display of non-refrigerated goods or for scale, slicer and cutting board. Top is covered with polished black panelyte bonded to heavy plywood and secured to the all steel top of the display case. Triple-glass sliding doors provide access to interior; front section has triple plate Thormopane glass with heavy chrome molding. Full length fluorescent lighting system, heavy porcelain mezzanine shelf. Two heavy duty coils and air baffle

circulation provide proper temperature and humidity for fresh foods, pastries, bottled goods, meats, dairy products. Dimensions are 42" high, 33" deep, 6 or 8 feet long. Available in either self-contained or remote models. Self-contained models have hermetic units, 5-year warranty.

#### Gasket Cutter • • • • • PA-6

**Product:** Gasket cutting tool for pliable sheet materials.

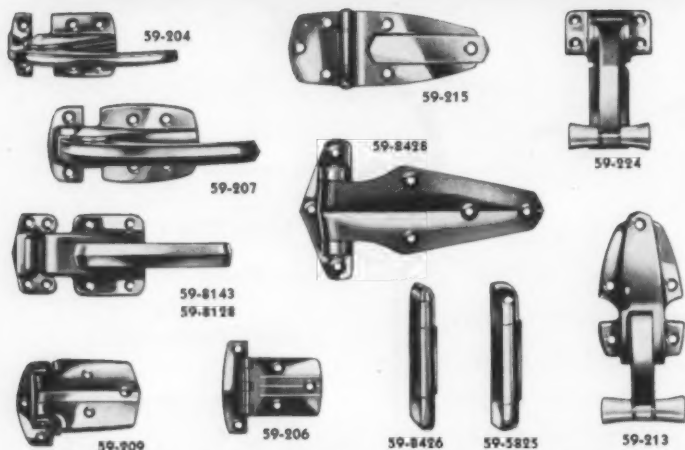
**Manufacturer:** Zimmerman



Packing Co., Cincinnati.

**Features:** New tool, called the "Spearhead Cutter", will cut accurate size gaskets from any pliable sheet materials, in round, odd, straight, square, rectangular, oval or irregular shapes. Made of durable phenolic plastic. Weighs less than 4 ounces, and is 4 1/4" long, 1 1/4" wide 3/4" high. "Ironing" action of cutter prevents buckling or crinkling of such pliable materials as rubber, asbestos, cork, felt, fibre, leather, etc. Will also cut balsam wood, cellophane, aluminum foil, neoprene, and similar materials. Adjustable screw knob permits setting of diameter for exact cutting of round gaskets and discs; for odd shapes, white guide-line allows easy following of pattern. Blade can also be adjusted for use as knife. Retail price \$7.50.

## NATIONAL LOCK REFRIGERATOR HARDWARE



### Widely Preferred For All These Commercial and Domestic Uses

Matched  
Sets  
•  
Beautiful  
Designs  
•  
Ease of  
Application

Reach-In Cabinets. Display Cases. Back Bars. Draft Beer Equipment. Bottled Beverage Coolers. Stokers. Milk Coolers. Florist Boxes. Coin-Operated Refrigerated Dispensing Machines. Low Temperature Horizontal or Vertical Cabinets. Many Other Types of Refrigerating Equipment.

Ask Your Jobber for Complete Information and Prices

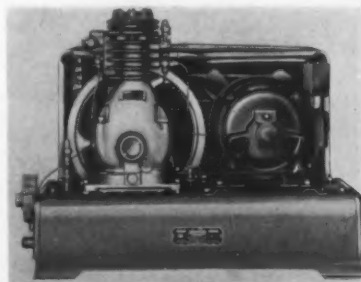


**NATIONAL LOCK COMPANY**  
Rockford, Illinois  
Refrigerator Hardware Division

#### Condensing Unit • • • • • PA-7

**Product:** Combination air and water cooled "Lipman" condensing unit.

**Manufacturer:** General Refrigeration Div., Yates-American Machine Co., Beloit, Wis.



**Features:** Units are available from 3/4 hp through 3 hp; and are designed for use in hot climates and for installations where temperatures are high and air circulation poor. When head pressure reaches a pre-determined point, water-cooled condenser automatically cuts in and both





## SUMMER DELICACIES

### *for Next Winter's Dinner*

In thousands of frozen food plants throughout the country the summer's crops pass through Jamison doors to await use next winter.

The frequent operation and heavy use given to these doors call for the rugged hardware and tight sealing action of Jamison-built doors. Standard doors are available for all ordinary temperature ranges and door openings—also, for such applications as can and crate passing, keg passing, ice cream can passing, ice chutes.

For detailed information on Jamison Cold Storage Doors request Catalog 175.



Jamison-Built Super-Freezer door of the overlap type for low temperature operation. Installation at Country Life Frozen Foods, Westbury, L. I., New York.



**Oldest and largest builder of  
cold storage doors in the world**

**JAMISON COLD STORAGE DOOR CO. • HAGERSTOWN, MD., U.S.A.**  
and AIR CONDITIONING • JANUARY, 1950

condensers then operate in series to hold head pressure down to normal point. As temperature of machine room is reduced, water-cooled condenser cuts out automatically. Unit is compact, simple in design and operation.

#### Recording Thermometers • PA-8

**Product:** "Minicorder" distant reading recording thermometer.

**Manufacturer:** The Dickson Co., Chicago.



**Features:** "Minicorder" Type 2 is gas actuated with uniform scale di-

visions and equipped with Dickson standard spiral Bourdon tube. Can be calibrated for different ranges from -100 to plus 800 F. Type 2-A is vapor actuated having increasing scale division for high sensitivity over limited range (-20 to plus 400 F).

Instruments weigh but 2 lb. and are enclosed in cast aluminum case finished in grey hammerloid and measuring  $5\frac{1}{4} \times 5\frac{1}{4} \times 2\frac{1}{4}$ ". Case is fully gasketed for protection. Standard units include 6 ft. of braid armored connecting tube and plain bulb. Longer connecting tube, screw connected bulbs, separate sockets of different metals available. Available in seven different types for recording temperature, vacuum, pressure and electrical operation as well as self-contained temperature recorders and two pen recorders to measure both temperature and electrical operation on same chart. Chart speeds of 12 hours, 24 hours and 7 days can be furnished.

#### Ice Cube Maker • • • • PA-9

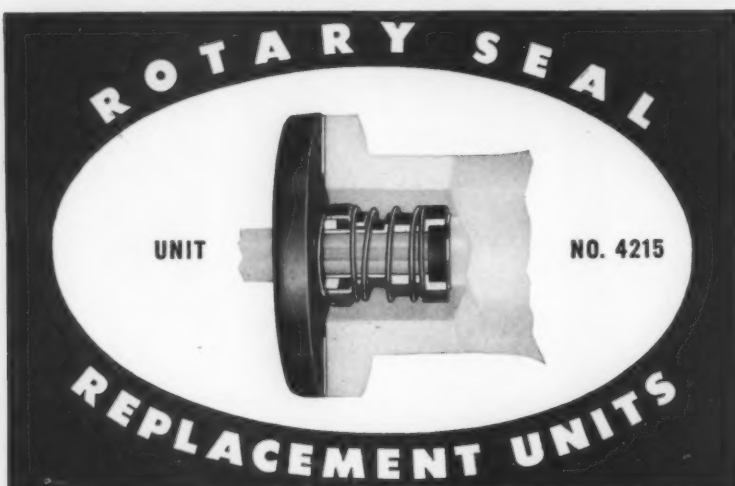
**Product:** Ice-cube making machine.

**Manufacturer:** Ice-O-Magic Corp., Minneapolis.



**Features:** Cabinet, finished in white, measures 40" high by 29" wide, has a daily ice production capacity of 700 lb., stores 200 lb. of ice cubes, ready for use. Manufacturer claims ice cubes produced by this unit will not stick together when stored. Has own self-contained water system with pure copper water tank. Evaporator unit also of pure copper and brass. Powered by  $\frac{3}{4}$  hp water-cooled condensing unit. Ice cubes produced by unit weigh  $1\frac{1}{8}$  ounce.

**BUY FROM YOUR REFRIGERATION WHOLESALE**



are available in a complete range of sizes—including the larger models for use in Commercial and Semi-Commercial Compressors, such as:

BAKER	CURTIS	MILLS
BRUNNER	FRIGIDAIRE	PAR
CARRIER	GENERAL ELECTRIC	UNIVERSAL COOLER
COPELAND	KELVINATOR	WESTINGHOUSE

and others

**MORE THAN  
848  
MODELS**



**AT ALL  
LEADING  
JOBBER**

**"Seal with**

**Certainty!"**

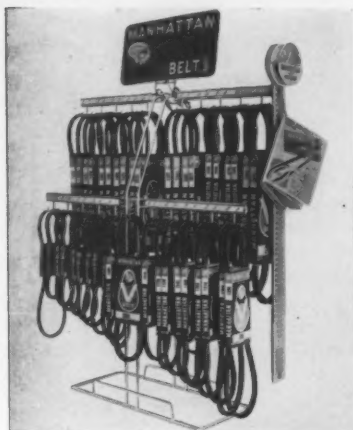
**2020 NORTH LARRABEE STREET  
CHICAGO 14, ILLINOIS, U.S.A.**

**CANADIAN AGENT: 2025 ADDINGTON AVENUE  
MONTREAL 28, QUEBEC, CANADA**

## V-Belt Rack • • • • • PA-10

**Product:** New type dealer display rack for V-belts.

**Manufacturer:** Raybestos - Manhattan, Manhattan Rubber Div., Passaic, N. J.



**Features:** Rack is designed to hold 40 belts, provide access to each belt without removing others on rack. A part of company's "tailored-to-your-market" assortments, rack conforms to national findings showing types and sizes of belts most frequently demanded, allowing dealer to meet maximum demand with minimum investment. Manufacturer claims assortment enables dealer to meet from 1052 to 1549 makes of machines with from 25 to 40 belt sizes provided. New V-belts have "truss-ly" feature providing more lateral rigidity and making strength members work together, giving smoother operation. Metal wall racks and wall display boards also available, plus dealer data book listing applications of belts, size gauge and length calculator, price chart, etc.

## Display Case • • • • • PA-11

**Product:** Newly designed wide display case.

**Manufacturer:** Hussmann Re-



frigeration, Inc., St. Louis.

**Features:** Mirror 28" high emphasizes volume and appeal of products displayed. Storage doors have concealed hinges with edge mounted hardware; finger-touch handles open doors easily. Stainless steel trim along bottom edge of display glass sets out product display. Supports around end glass have been made sturdier and more attractive; heavy metal trim used on extreme corners of case for extra protection at this spot. Basket cart guard rail provided for protection of case panels and stor-

age doors. Cases may be set up in single units or multiple installations for continuous display. Cases are designed for produce display model WS-10 and meat display model WS-10M. Available for immediate delivery.

## Ice Cube Maker • • • • • PA-12

**Product:** New low-cost ice cube maker.

**Manufacturer:** Brewer-Titchener Corp., Binghamton, N. Y.

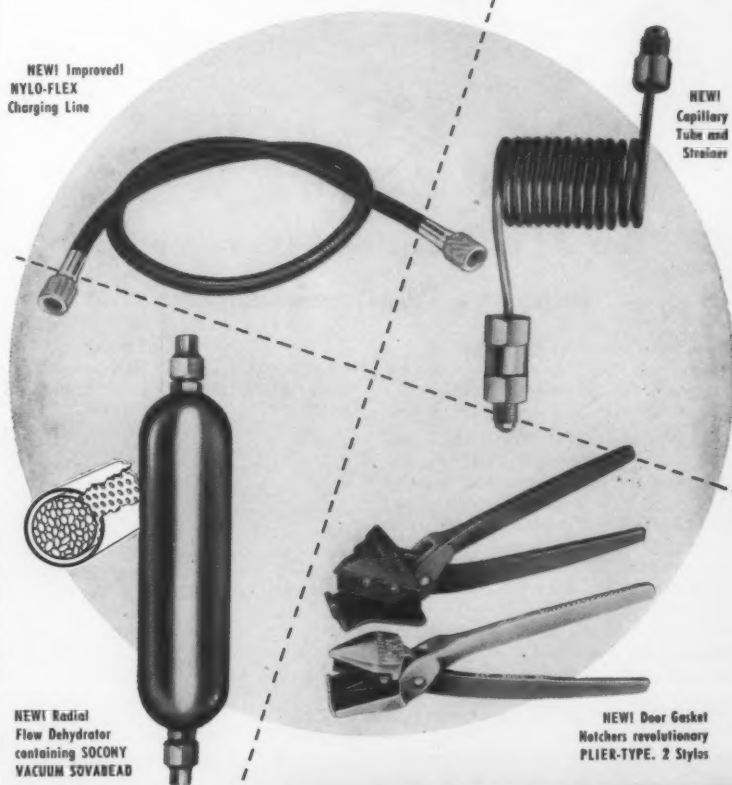
# TECHNIFLEX

the great American  
headquarters for EVERYTHING  
that's MOST EFFICIENT in  
QUALITY REFRIGERATION  
ESSENTIALS

Gaskets  
Sponge Rubber Tubing  
Vibration Eliminators  
Coupling Connectors  
Vibration Mounts  
Ful-Vu Sight Glasses  
Line Check Valves  
Purging Hose  
Neoprene Covered Conduits  
Special Assemblies

NEW! Improved!  
NYLO-FLEX  
Charging Line

NEW!  
Capillary  
Tube and  
Strainer



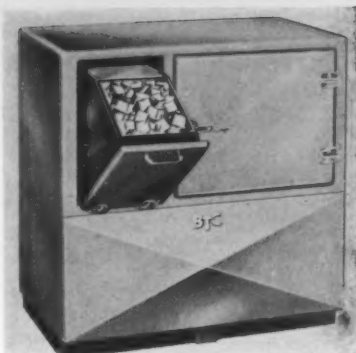
NEW! Radial  
Flow Dehydrator  
containing SOCOMY  
VACUUM SOVAREAD

NEW! Door Gasket  
Notchers revolutionary  
PLIER-TYPE. 2 Styles

**TECHNIFLEX CORP.**  
PORT JERVIS, N. Y.

**Sales Agency:** Refrigerated Equipment Sales Corp., New York City.

**Features:** Capable of producing 2300 cubes or 250 lb. of ice per day. Plug-in operation; no plumbing connections necessary. Equipped with 24 quick-release trays which produce 384 cubes (40 lb. of ice) per freezing. Cubes stored in easy-opening storage bin, separated from freezing section. Unit is 40½" high, 24" deep, 38" wide, so it can be located under bar or counter if desired. Powered by 1/3 hp hermetic unit. Has full-flooded



type plates, all-welded steel construction, "Flotofoam" insulation, silver "Hammerstone" finish. If desired, unit can be furnished without condensing unit, and for DC operation on special order.

#### Ice Cream Freezers • • PA-13

**Products:** Seven new models of ice cream freezers.

**Manufacturer:** Tekni-Craft, Beloit, Wis.

**Features:** 1950 line consists of six new freezers and one combination mix and hardening cabinet, all with self-contained condensing units. Company also has announced suggested list prices f.o.b. factory, a policy new to freezer industry, prices previously having been quoted only by distributors.

**Model 60:** 6-quart freezer on cabinet, no mix or hardening space, with ½ hp Complametic unit, priced at \$898.

**Model 63:** 6-quart freezer with combination 40-gal. cabinet (20 hardening, 20 dispensing), with ½ hp machine, priced at \$1248.

**Model 66:** two 6-quart freezers on cabinet, no mix or hardening space, with ¾ hp machine, priced at \$1398.

**Model 101:** 10-quart freezer on cabinet, no mix or hardening space, with 1 hp water-cooled machine, priced at \$1498.

**Model 102:** two 10-quart freezers on cabinet, no mix or hardening space, with 1 hp machine, priced at \$2498.

**Model 201:** 20-quart freezer on cabinet, no mix or hardening space, with 1½ hp machine, priced at \$1898.



### ... this **NEW** Precision Testing Gauge Set joins the "Serviceman" line

Here's the final answer to your testing gauge needs... a handsome new pair of precision instruments for use on manifolds and other testing operations.

Down to the last detail these are real testing instruments. They are calibrated to the high accuracy of plus or minus 1% over their entire range and have knife edge pointers to facilitate close reading. Note that one is a compound retard gauge with wide, easily read, one-pound graduations through the important testing range of 0-50 lbs. and one inch graduations in the vacuum range. The other is equally accurate throughout its 300 lb. range.

Only Marsh experience and advanced production facilities could produce testing gauges of this quality at a surprisingly moderate price. Both gauges have the superlative Marsh heavy-duty bronze bushed movements and the Marsh RECALIBRATOR. The 2½-inch cases are polished brass with screwed and knurled ring, beveled glass crystals, and restriction screw in the connection. Easy removal of the screwed ring provides access to the RECALIBRATOR for quick, accurate adjustment.

Here is the gauge set for the man who wants the ultimate in testing instruments. Ask for new bulletin.

**MARSH INSTRUMENT COMPANY,** Sales Affiliate of JAS. P. MARSH CORPORATION  
DEPT. P SKOKIE, ILLINOIS



#### Movable Cabinet • • • • PA-14

**Product:** Movable frozen food display cabinet.

**Manufacturer:** L. C. Warren Jr., Co., Inc., Atlanta, Ga.

**Features:** Cabinet has 4.2 cu. ft. capacity, is mounted on rubber-tired, ball-bearing, swivel-type casters. Designated as LC-4, unit is 29½" long, 25½" wide, 38" high to lip of cabinet; top opens (has plate glass mirror on under side of lid) giving overall height of 59½". Capacity is 128 standard packages. Cabinet is equipped with bracket in back which holds glass side panels when top is closed, a feature claimed to save one-fourth operating costs.



## CONTRACTORS . . .

*Continued from page 32*

continue to assist local groups wherever possible, and he emphasized the importance of members submitting suggestions, complaints and problems to guide the trade relations committee in its activities.

Harvey O. Miller, chairman, reported for the labor relations committee, requesting members to supply all information requested so that the committee can more effectively perform its work.

G. T. Rostock, chairman of the air conditioning committee, recommended that RACCA solicit the cooperation of the American Institute of Architects to halt the tendency among architects and mechanical engineers to load air conditioning jobs with "all sorts of superfluous gadgets".

"Many of these (gadgets) are not essential to the satisfactory operation of the average comfort-cooling job," he asserted. "If these gentlemen could be persuaded to work more closely with the air conditioning contractor, and follow his suggestions in eliminating some of these extras, many air conditioning jobs could probably be sold that are now being shelved or abandoned because of the price factor."

A second problem, Rostock said, is "a trend in the plumbing industry to absorb the air conditioning business."

"Refrigerated air conditioning is definitely a part of the refrigeration industry, entirely separate from plumbing," he declared. "It should be established as a field in its own right, not to be included in plumbing specifications, but written into building specifications under a separate heading. The equipment would then be bid by the refrigeration and air conditioning contractor directly to the general contractor. This would eliminate the plumbers' mark-up on the air conditioning bid, and fewer jobs would be priced out of the market."

A progress report on activities of the ASA-B9 code committee was made by H. J. Prebensen, who said that a seventh draft of the code has been deferred until certain points of conflict can be straightened out with the ASME boiler code committee. He recommended the continuance of RACCA's support and participation

in the code program, in the interest of overall industry welfare.

Condensations of some of the talks presented at the RACCA convention, stressing the importance of sales and other subjects of equal interest to contractors, will be presented in subsequent issues.

### NOW IN HARRISON, N. Y.

The York Westchester Corp., recently moved from 258 E. Third St., Mt. Vernon, N. Y., to 44 Purdy Street, Harrison, N. Y.

### NOLAND TO DISTRIBUTE FOR WESTINGHOUSE

Noland Co., Newport News, Va., has been named as a distributor for Westinghouse water heaters, the Waste-Away garbage disposer, dishwasher, water coolers, and fans. The line will be handled by the 22 Noland branch offices that serve the eastern seaboard from Washington, D. C., to Jacksonville, Fla.

**BUY FROM YOUR  
REFRIGERATION WHOLESALE**

## DAVISON Refrigeration Grade SILICA GEL

**AGAIN**, this year, a poll of servicemen in the field proved that an overwhelming majority of them, when requesting a brand of refrigerant drying agent, name PA 100 Davison Refrigeration Grade Silica Gel.

Business-wise jobbers keep on hand a good supply of PA 100—the proved, safest, surest, and world's largest selling refrigerant drying agent. Check your stock now.

*Sell and recommend the dehydrators charged with PA 100 . . . and in the bulk can with the blue label.*

\*T.M. REG. APP. FOR

**THE DAVISON CHEMICAL CORPORATION**  
*Progress through Chemistry* **D** **BALTIMORE-3, MD.**

**PIONEERS AND DEVELOPERS OF SILICA GEL**

Canadian exclusive agents for DAVISON SILICA GEL:

CANADIAN INDUSTRIES LIMITED, Sales Division—Chemicals Department

## ELECTRONIC CONTROL...

*Continued from page 37*

in cooling systems since it is possible to raise room temperatures slightly as outdoor temperature rises.

As an example, assume a 5— degree throttling range and a rise of 10 degrees in room temperature as the outdoor air rises from 70 to 100 F. Since the throttling range provides 5 degrees, the outdoor compensator will have to provide an additional 5 degrees. This is a change of 5 degrees

in 30 or about 16½%. This setting is then made at the authority potentiometer<sup>2</sup> in the relay circuit.

Figure 5 shows the schematic layout and Figure 5A the electronic bridge. The outdoor compensator has been added as an additional leg to this bridge and the outdoor authority setting will determine the overall effect of the outdoor compensator in this circuit.

<sup>2</sup> Authority Potentiometer—Setting determines percentage of signal voltage from compensator to be applied to the electronic relay.



## ... a lifetime of LOW COST TRUCK REFRIGERATION!

Kold-Hold "Hold-Over" Truck Refrigeration puts extra profits in your pocket. It protects products in transit and gives it greater customer appeal. It does all this for less than 10 cents a day, less than the cost of ice alone.

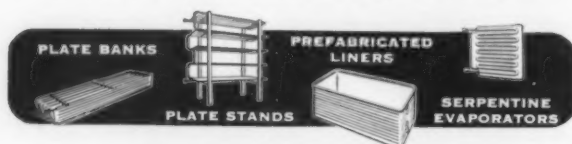
With Kold-Hold "Hold-Over" Plates you can predetermine the desired truck temperature throughout the longest day's runs to keep products safe, clean, attractive and more saleable. "Hold-Over" Plates last the lifetime of the truck. The extra long life of Kold-Hold "Hold-Over" Plates is due to exclusive design features which eliminate operational failures. In

"Hold-Over" Plates, the outer edges freeze first and the strain caused by expansion is placed on the center and strongest part of plate.

### NO CASE OF OPERATIONAL FAILURE EVER REPORTED

With over one-half million "Hold-Over" Plates in use today, no case of operational failure has ever been reported. Trucks equipped with Kold-Hold "Hold-Over" Plates have been subjected to the most severe operating conditions possible, in all types of trucks. Never yet have they failed to provide the refrigeration needed.

See your local refrigeration supplier or write us for details



## KOLD-HOLD

protects every step of the way

KOLD-HOLD MANUFACTURING CO., 503 E. Hazel St., Lansing 4, Mich.

Such a system can be used on either heating or cooling applications. The outside compensator is used to raise the control point on cooling applications and to eliminate the droop on heating installations. Whether it is to be used on a heating or cooling application will determine its location in the electronic bridge.

Similar applications are possible on both heating and cooling installations. For example, the room thermostat can be replaced by a ductstat in the discharge air to control discharge temperature, Figure 6. It may also be replaced by an immersionstat located in the zone water supply, Fig. 7.

The ductstat consists of a 500-ohm coil of resistance wire on a cylindrical form impregnated to resist moisture. A typical application is its use as a compensator in an air conditioning system as shown in Figure 6.

In this application the outdoor compensator and discharge ductstat measure the air temperature changes at their respective positions and, through a relay, control the air conditioning system to provide corrective heating or cooling before the temperature change occurs in the conditioned space.

The immersionstat is basically identical to the ductstat, the principal difference being that it is fitted to a well to protect the element from the liquid medium in which it is submerged.

A typical application of an immersionstat is shown in Figure 7, which diagrams a system in which water temperatures must be controlled. The outdoor compensator reacts to ambient temperatures and the immersionstat calls for more or less cooling, dependent upon the liquid temperature.

(To be continued)

## SINGER IS PARTNER IN FLORIDA COMPANY

Joseph H. Singer is now a partner in Airko Air Conditioning Co., 1119 16th St., Miami Beach, Fla. He will be in charge of sales and engineering for the firm.

Singer was wartime production engineer for General Electric Co. plants in Lynn, Mass., and Schenectady, N. Y., which built and tested Navy steam turbines and radar gear. He returned to Miami in 1947 from the General Electric plant in Bloomfield, N. J.



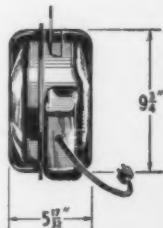
# THE TECUMSEH *COMPACT*

## The Ideal Hermetic Motor Compressor for Limited Space Applications

WHERE limited space is a problem, look to the Tecumseh Compact for the perfect answer.

Only  $9\frac{3}{4}$ " high, only  $5\frac{1}{2}$ " thick, it permits *increased* food storage space, with *no increase* in cabinet dimensions. . . . The Tecumseh Compact is a single cylinder,  $1/9$ th horsepower hermetic. In combination with various types of condensers and evaporators, the Compact will efficiently refrigerate systems ranging in size all the way from small apartment or trailer boxes up to eight cubic foot domestic refrigerators—also many light commercial appliances. . . . Internal spring mountings, forced feed lubrication, automatic cylinder wall lubrication, and other famous Tecumseh engineering features assure smooth, quiet, long-lasting performance. . . . Write for literature.

For versatility of application the Tecumseh Compact has no equal. It may be suspended on the back of the cabinet or placed in a depression or offset in the cabinet liner, thus allowing the food storage compartment to be lowered practically to floor level. Result: *increased* storage capacity, *no increase* in cabinet size.



### TECUMSEH PRODUCTS COMPANY

TECUMSEH, MICHIGAN

Export Dept., 2111 Woodward Ave., Detroit 1, Mich.

WORLD'S LARGEST

INDEPENDENT PRODUCER OF COMPRESSORS AND CONDENSING UNITS FOR THE REFRIGERATION INDUSTRY

and AIR CONDITIONING • JANUARY, 1950



## Over the COUNTER

### Price Cutting

(This is the second and concluding part of this article. Part 1 appeared in this column last month.)

3. The feeling that it is necessary to quickly liquidate inventory and return cash to the business.

*The answer to this problem, where excessive inventory creates a shortage of working capital, is to step up your collections of accounts receivable, secure loans if possible, offer your surplus inventory to your competitors, work out a deal to return part of it to your sources of supply, or step up your sales activity for larger volume at regular prices.*

4. An attempt to compensate for lack of experience or business ability on the part of the operator.

*The only sensible answer in such a case is to sell your business and go into some other line of endeavor or get either a partner or employee who possesses sufficient business ability to establish the enterprise on a firm, sound business basis. Remember, no one company has a corner on price cutting. Your competitor has the privilege of cutting prices as well as you do, if he is so foolish, or if his business is seriously effected by your foolish practices along this line.*

There are actually very few businesses today enjoying such excessive gross profits as to justify price cutting or reductions. On the other hand the costs of doing business today are higher than they have ever been in modern business experience.

*During the highly competitive period ahead real business ability will be needed to successfully operate your business even when getting the benefit of maximum profits and any reduction in operational expenses brought about by efficient operation. How can you possibly figure to sur-*

*vive by deliberately giving away a vital part of your profits by cutting prices?*

Your business is a vital part of your very existence. It can become a monument to your achievement or a final resting place for your hopes and ambitions. Be firm in making your business policies and decisions. Operate your business along ethical practices. Work to secure the greatest possible profit your business will provide. Far better to sacrifice volume than to undermine your profit structure and demoralize your competitive situation.

*While business today may not measure up to your all time business record of last year, you can be heartened by the fact that it is far ahead of any records established before the war years.*

Don't be a price cutter. Play the game safe, reach your objective by sound business practices. You and your competitors will all be better off and more successful in the long run by so doing.

*Remember, this is your own business. If you ruin this business you may never have a chance to own another.*

#### NEW SCRANTON "HOME" FOR CENTRAL SERVICE

Central Service Supply, refrigeration and air conditioning parts wholesaler, expects to move about Jan. 15 into new, larger quarters in Scranton, Pa., at 918 N. Washington Ave., reports Ted Glou. The firm also has a store in Syracuse, N. Y.

**BUY FROM YOUR  
REFRIGERATION WHOLESALER**

#### PAUL CATO HEADS SOUTHWEST JOBBERS

Paul Cato, Texas Refrigeration Supply Co., Fort Worth, was elected president of the Southwest Refrigeration Wholesalers Association at the organization's semi-annual meeting Oct. 13 and 14 at the Blackstone hotel, Fort Worth.

Don Cornell, Standard Brass & Mfg. Co., Beaumont, Tex., was named vice chairman, and Carl Miller, Refrigeration & Electrical Supply, Little Rock, Ark., secretary-treasurer.

Directors are K. G. Wight, K & M Supply, Tulsa, Okla.; O. D. Sparkman, N. O. Nelson Co., Dallas, Tex.; Clyde Westbrook, Westbrook-Carburetor Electrical Co., San Antonio, Tex.; W. C. Reeves, Enochs Sales Co., New Orleans; and W. H. Cheatwood, Interstate Electric Co., Shreveport, La.

New members admitted to the association at the meeting were: M & M Refrigeration & Electric Supply, El Paso, Tex.; Kold-Aire Supply Co., Inc., Fort Worth; Wholesale Supply Co., Inc., El Paso; and C & H Distributing Co., Abilene, Tex.

F. V. Wilson, a director of Refrigeration Equipment Wholesalers Association, reported on the recent meeting of REWA directors. Next meeting of the regional group is scheduled for New Orleans in March, 1950.

#### BUYS THERMOMETER CO.

The thermometer business of the American Thermometer Co. St. Louis, Mo., has been purchased by the H-B Instrument Co. of Philadelphia.

#### WORK FOR McCOMBS



J. C. Knight



G. C. Andresen

Representative of McCombs Refrigeration Supply Co., Denver, in its new Albuquerque, N. Mex., territory is J. C. Knight. G. C. Andresen has newly been added to the McCombs staff to provide specialized engineering and sales assistance to the firm's dealer and contractor customers.



## 6 REWA PAST PRESIDENTS COMPARE NOTES



Photo by Irving Alter, Harry Alter Co.

Six past presidents of Refrigeration Equipment Wholesalers Association compare notes at the REMA cocktail party during the 6th All-Industry Show in Atlantic City. Left to right are: George Roche, Baltimore, Md.; "Whitey" Holt, Pittsburg, Pa.; Frank Langsenkamp, Indianapolis, Ind.; Ted Glou, Syracuse, N. Y.; Harold McCloud, Cincinnati, Ohio, now executive secretary of the organization; and Bob Spangler, St. Louis, Mo.

### WIDER SHOWING IN ARMY BUSINESS URGED

Maj. Gen. Herman Feldman, Army Quartermaster General, is urging broader participation of industry, particularly small business firms, in Quartermaster business.

Pointing out that any responsible and qualified manufacturer or regular dealer may bid on Quartermaster supply requirements, the general said the opportunity to compete for these contracts is simple: merely get the name of the firm on the bidders' list to receive invitations to bid.

Refrigeration equipment and ice cream plants are purchased by the Chicago Quartermaster Purchasing Office, 1819 West Pershing Road, Chicago 9, Ill. Any qualified manufacturer of such equipment or regular dealer may be placed on the list to receive invitations to bid simply by writing to this purchasing office, requesting a blank form to receive invitations to bid. The form will be sent to the applicant, who after filling it out and returning it to the purchasing office, will have the name of his firm placed on the list.

Thereafter, when the Quartermaster Corps is in the market for such equipment, the firm will receive copies of invitation to bid, together with blank bid forms, and detailed instructions as how to fill out and file the bid. The invitation will state the place and time of bid opening. Any bidder or his representative may attend the public bid opening.

Manufacturers or regular dealers

who do not know which military department may be in the market for their products can obtain such information by addressing an inquiry to the Military Procurement Information Center, Office of the Secretary of Defense, The Pentagon, Washington, D. C.

### OPENS NEW BRANCH IN JACKSON, MISS.

Opening of a new branch store at 111 E. Hamilton St., Jackson, Miss., has been announced by H. A. Dawson, president of Acme Refrigeration Supplies, Inc., parts wholesaler. Manager of the branch will be Luther Williford Jr., and field sales representative will be Robert R. Berry. The firm also operates stores in New Orleans and Baton Rouge, La.

### NEW ALTER CATALOG

Newest refrigeration arts and supplies catalog—Dependabook No. 151—issued by Harry Alter Co., Chicago wholesaling firm, contains 148 illustrated pages and lists many items at bargain prices, according to Joseph Novotny, the company's advertising manager.

The Alter catalog is available to anyone in the trade upon request. Write directly to Harry Alter Co., 1728 S. Michigan Ave., Chicago 16, Ill.

**BUY FROM YOUR REFRIGERATION WHOLESALE**

## Paragon CHRONO-SPRAY FAIL-SAFE TIME CONTROLS

for water-spray  
defrosting



### SERIES MG-3

for Locker Plants, Big Unit  
Coolers, Walk-in Boxes, Air Con-  
ditioning, Breweries, Dairies, etc.

Provides three adjustable periods:  
delay, water spray, and drain. "Fail  
safe" feature prevents evaporator fans  
from running during water spray  
cycle when unit is being defrosted.

See your jobber or write for free  
bulletins and installation data.

## Paragon ELECTRIC COMPANY

1488 TWELFTH STREET  
TWO RIVERS, WISCONSIN

America's Foremost exclusive  
manufacturer of Time Control  
Switches for all uses,  
including "de-frost-it" for  
domestic refrigerators, only



\$9.95

## LOOK to LARKIN

for Low Prices



### LARKIN CEILING HUMI-TEMP

Price is only one factor in the selection of any product—especially one that has so important a task as protecting valuable perishables. Performance must come first. Quality cannot be overlooked. Durability is highly important. Larkin has all of these. And Larkin has low prices, too. Compare them and see for yourself how low they really are.

For the latest Larkin price list, see your wholesaler. If you wish, write direct to us and we shall be glad to send you one.

Manufacturers of the original Cross-Fin Coil — Humi-Temp Units — Evaporative and Air Cooled Condensers — Air Conditioning Units and Coils — Direct Expansion Water Coolers — Steel Vacuum Plate Coils — Heat Exchangers.

WATCHDOG OF THE NATION'S FOOD SUPPLY

**LARKIN COILS**  
319 MEMORIAL DR., S.E. • ATLANTA, GA.

## WAGE-HOUR LAW . . .

*Continued from page 28*

included in determining the "regular rate" of pay. Determining this "regular rate" is, of course, the essential first step in figuring out the required overtime rate of  $1\frac{1}{2}$  times the "regular rate".

The new law does not change the basic rule laid down by the Supreme Court that the "regular rate" means the hourly rate actually paid for the ordinary, non-overtime workweek. Thus, if for the non-overtime workweek, an employee receives wages or piece rates, bonuses, commissions or board and lodging, they (or their value) all must be included in the regular rate. To compute the regular hourly rate, all that is done is to take these total payments and divide by the number of hours worked.

The situation began to get complicated when questions arose as to whether premiums paid for Saturday, Sunday, holiday or night work were to be included in the regular rate or left out; or whether gifts were to be included in the regular rate; or whether employer payments for group life insurance were to be included in the regular rate; etc.

A start was made toward clarification in an amendment to the Wage and Hour Law enacted July 20th of this year whereby there could be excluded from the regular rate any premium paid for work on Saturdays, Sundays, holidays, the sixth or seventh day of a workweek or work outside the basic, normal, or regular workday or workweek provided that the premium is at least  $\frac{1}{2}$  the rate for like work performed in non-overtime hours.

The new law provides further clarification by enumerating additional types of payments which need not be included in the computation of the "regular rate":

(1) Gifts, but only if the amount of the gift does not depend on hours worked, production, or efficiency.

(2) Payments made for occasional periods when no work is performed due to vacation, holiday, illness, failure of the employer to provide sufficient work, or other similar cause.

(3) Reasonable payments for travel expenses or other expenses, incurred by an employee in the furtherance of his employer's interests and reimbursable by the employer.

(4) Other payments to an employee which are not made as compensation for his hours of service.

(5) Payments made in recognition of services, but only if the payment is determined solely by the employer and not pursuant to any contract, agreement, or promise.

(6) Payments made pursuant to a bona-fide profit sharing plan or trust, or thrift or saving plan, but only to the extent that the amount is not determined by hours of work, production, or efficiency.

(7) Payments as talent fees to



*Photo by Irving Alter, Harry Alter Co.*

Ray Kromer (left), one of the founders of the Refrigeration and Air Conditioning Contractors Association (then known as the National Association of Refrigeration Contractors), toasts the success of the organization with Bob Noll (center), newly elected president, and Hal Wheeler, immediate past president. The three got together at the REMA cocktail party at the 6th All-Industry Refrigeration and Air Conditioning Show.

performers and announcers in radio and television.

(8) Contributions irrevocably made to a trustee or third person pursuant to a bona-fide plan for providing old-age, retirement, life, accident, or health insurance or similar benefits to employees.

(9) Extra compensation for work in excess of 8 hours per day or 40 hours per week or in excess of the employee's normal or regular working hours. This extra compensation may be credited against any overtime payments due under the law.

### Fluctuating Workweeks

Under the old law, an employer who wanted to pay his workers a constant wage even though they were required to work more than 40 hours some weeks and less than 40 hours

other weeks found that it was almost impossible to develop such a plan which would not be held to be in violation of the law.

The new law sets forth a method for leveling out the pay of employees who must work irregular hours. The employer and the employee or his representative are permitted to agree upon any regular rate of pay not less than 75 cents an hour. The employer guarantees pay for some agreed-upon number of hours, not exceeding 60 a week, with time and one-half after 40 hours. By fixing a low hourly rate and a high number of hours per week, the weekly pay generally can be kept constant.

For example, if an employer wishes to pay an employee \$70 per week—regardless of fluctuating hours—he could provide a basic rate of \$1 per hour and a guarantee of 60 hours of work. If the employee works 40 hours he gets \$70; if he works 50 hours he still gets \$70 under the guarantee (his calculated rate would be only \$55 including 10 hours at time and one-half); if he works 60 hours he would still get \$70 (which is equal to the calculated rate, 40 hours at straight time and 20 hours at time and one-half). Only if he works more than 60 hours would he be paid more than \$70 per week. Thus, if he works 70 hours he would be entitled to \$85 for 40 hours at straight time and 30 hours at time and one-half.

Now that employers may adopt this kind of constant wage plan without violating the law, they may want to investigate its use carefully. In many cases, a constant wage is a more desirable method of wage payment and it will frequently simplify payroll accounting.

### Simplifying Payroll Accounting

Under the old law, if an employee worked at piece rates or if he performed more than one kind of work during the week at varying rates, the calculation of the regular rate of pay often became very complicated. The regular rate had to be an average hourly rate for the work done during the week. For this reason, it could not be calculated until after the week was over and the performance and earnings records were all available.

The new law provides several ways to simplify the calculations.

Where piece rates are used, no complicated calculation need be performed. Work done during overtime

hours may be paid for simply at 1½ times the piece rate applicable to the same work during non-overtime hours.

Where an employee works at different hourly rates during the week, there is also no longer any need for a complicated calculation. Here too, the new law provides that overtime hours may be paid for at 1½ times the rate applicable to the same work during non-overtime hours.

The new law also provides another way to handle the situation where the regular rate of pay is difficult to figure out. It permits the establishment, either by agreement or understanding between the employer and his employees, of a basic rate for a particular job. This basic rate may then be used as the regular rate for the purpose of computing overtime. There is one condition. The basic rate established must be authorized by the Wage and Hour Administrator as substantially equivalent to the average hourly earnings of the employees in the particular work over a representative period of time.

These methods offer real opportunities for simplifying payroll accounting. Care should be taken in their introduction. But the possibility of using them should not be overlooked.

#### Penalties Less Severe

Previously, the purchaser of so-called "hot goods" (goods produced under conditions which violate the Wage and Hour Law) who transported, shipped, delivered or sold any of them was subject to criminal penalties even if he did not know that the goods were "hot". This harsh restriction is now greatly eased.

The purchaser will suffer no penalties if he bought the goods in good faith relying on written assurance from the producer that they were produced in compliance with the requirements of the Act. Purchasers who wish to be protected should henceforth require such written statements from their suppliers.

#### CHICAGO McCRAY BRANCH OPENS NEW QUARTERS

Food dealers and operators of food serving establishments in the Chicago area were guests of McCray Refrigerator Co. recently at an open house observing the opening of a new branch sales room at 3503-05 N. Halsted St., Chicago. H. George Entress is manager of the branch, which serves as a contact point for seven McCray dealers in the area. New branch replaces the former location, destroyed by fire last year.

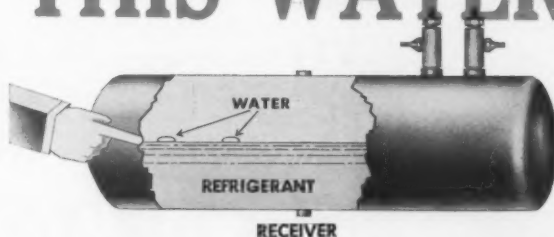
Factory men attending the opening

were R. J. Rehwinkel, W. L. Herald, Gerry Brandt, G. H. Ziebell and W. R. Howard.

#### RESIGNS FROM RANNEY

Clinton Millman has resigned as vice president and general manager of Ranney Refrigerator Co., Greenville, Mich. He had been with the company for 12 years, starting as west coast manager. He was named a vice president in 1947. Ranney is a contract manufacturer of household refrigerators.

## JUST ONE WAY TO REACH THIS WATER



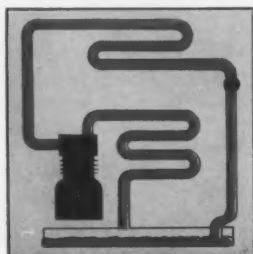
Water trapped in the receiver, or anywhere else, can only be reached with a liquid drier. How can you tell whether water is trapped in the system? You can't. So you can't be sure you're reaching all the moisture unless you use a liquid drier... Thawzone.

Wherever moisture goes, Thawzone goes, too. It reaches the expansion valve, the receiver, the coil, the

tubing walls, both highside and lowside. What other method can do that? You're sure you've found the moisture when you use Thawzone.

Did you know that only Thawzone actually eliminates water permanently? Other methods hold water and sometimes release it later. The water removed by Thawzone cannot possibly return. Fewer callbacks for you.

Use Thawzone in "Freons", methyl chloride, "Carrene" or isobutane. 1 teaspoonful (½ oz.) per pound of refrigerant. Use half as much in hermetic units. Highside Chemicals Co., Colfax Ave., Clifton, N. J.



GOES WHEREVER WATER GOES

**THAWZONE®**  
LIQUID DEHYDRANT...  
*reaches all the moisture*

**Fight  
Infantile  
Paralysis**

**JOIN  
THE MARCH OF  
DIMES**

THE NATIONAL FOUNDATION FOR INFANTILE PARALYSIS

**HINCKLEY & SCHMITT**  
*Measured and Qualified*  
*Water Distributors*  
*since 1890*  
*Chicago, Ill.*

*"definitely a time saver"*  
*"very simple to adjust"*  
*"performance very satisfactory"*

—so writes Frank Kloss, Service Supervisor of Hinckley & Schmitt, World's Largest Water Distributors.

## NEW ALLIN CAPILLARY TUBE

Easy external adjustment—for ALL refrigerants—on any job from 1/4 H.P. to 1 H.P.

Large area 150 mesh Monel screen protects orifice against clogging.

Straight-through design provides accurate means of metering refrigerants

**ASK YOUR WHOLESALE**  
or write direct for additional information and prices.

Export Division: Kelvinator Export Division, 14250 Plymouth Road, Detroit 32, Michigan.

**ALLIN MANUFACTURING COMPANY**  
1153 West Grand Ave., Chicago 22, Ill.



IT'S A MONEY-  
MAKING CHORE  
TO CHECK  
THE GASKET  
ON THE DOOR

**JARROW PRODUCTS**  
420 N. LA SALLE ST., CHICAGO 10, ILLINOIS

## OPPORTUNITIES

(Classified Advertising)

Rates: for "Positions Wanted," \$4.00 minimum, limit 25 words. For all other classifications, \$4.50 minimum for 25 words or under, each additional word 15c; boldface type or all capitals, \$7.50 minimum for 25 words or under, each additional word 20c. Box addresses count as five words, other addresses by actual word count. All advertisements in this section are payable in advance.

### POSITIONS WANTED

Carefully selected group of trained men, graduates of reliable and well established trade school, now available to fill positions in the Radio or Refrigeration field. Willing to travel anywhere. Why not fill that vacancy with an efficient and reliable man. Write Eastern Technical School, 888 Purchase Street, New Bedford, Mass.

### BUSINESS OPPORTUNITIES

Tired of "highballing"? Buy our nice little Grocery business. Good Man & Wife proposition, with time for one to work out if desired. Offering property, equipment (value \$2450.00) inventory (value \$2500.00) and living quarters all for \$9500.00, or would accept less for cash. 335 ft. highway frontage. Bldg. 26x40 ft. Grossing over \$27,000.00 Yr. Can easily net over \$1800.00 and lot of good Hunting & Fishing. Write to L. E. Miskella, P. O. Box 612, Olympia, Wash.

**PROFIT-MAKING OPPORTUNITY.** A large manufacturer of a nationally-known home appliance having an average sales price of \$470.00, yielding average return \$168.00, with investment of less than \$4000.00 (inventory

assistance available), will make selection of an exclusive merchandiser for cities over 25,000 and surrounding trading area. Interested applicants write for interview, giving full particulars. The Fensholt Advertising Agency, 360 N. Michigan Avenue, Chicago 1, Illinois.

### PHILCO PAYS DIVIDEND

The board of directors of Philco Corp. has declared the regular quarterly dividend of 50 cents per share on the Corporation's Common Stock. The board also declared the regular quarterly dividend of 93 3/4 cents per share on the corporation's preferred stock, 3 3/4 % Series A.

### FLORIDA FIRM EXPANDS

H. C. Hancock, owner of Hancock Refrigeration Co., Hialeah, Fla., authorized Frigidaire dealer for the northwest section of Miami, will expand his showrooms by taking over the adjoining store.

### OPENS NEWARK OFFICE

Don E. Hawk Associates, New York City air conditioning and ventilating sales engineer firm, has opened a New Jersey office at 51 Clinton St., Newark. Harry A. King is in charge.

**BUY FROM YOUR  
REFRIGERATION WHOLESALE**

**NO MORE FREEZE-UPS**  
*of expansion valves or capillary tubes!*

**ICE-X** works like magic  
**SERVICE MEN SAY: "ICE-X IS GREAT!"**

When ice forms in expansion valves or capillary tubes, ICE-X is a sure remedy . . . ICE-X is non-corrosive—harmless to parts. An ice-eliminator that can't be beat for Freon, Carrene, or Methyl Chloride systems . . . Order from your jobber. If no jobber, order direct.

**Service doesn't falter when it comes from Harry Alter**

**The HARRY ALTER CO.**  
 1728 S. Michigan Ave. Chicago 16, Illinois

**Jobbers: Ask for special offer!**

Exclusive ICE-X Distributor



# Drier THAN THE SAHARA

## ANSUL Refrigerants

## ANSUL OIL



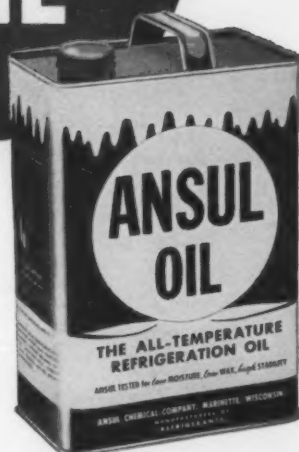
Reg. U. S. Pat. Off.



**D**RYNESS is a critical requirement in the specifications of ANSUL Refrigerants and ANSUL Refrigeration Oils. To safeguard the dryness of Ansul Refrigeration Products, specially designed container-drying and product-dehydrating equipment is used to eliminate the last trace of moisture.

Moisture in refrigeration systems results in the formation of ice, rust, sludges, and contributes to the development of other impurities and complications. These seriously interfere with the proper operation of a refrigeration system.

ANSUL Technicians have prepared a series of bulletins on the effects of moisture and other foreign matter in refrigeration systems. Copies may be obtained from ANSUL wholesalers or by writing directly to Ansul Research.



### ANSUL 150 OIL —

The All-Temperature Refrigeration Oil — is sold by leading refrigeration wholesalers everywhere. (If you require a higher viscosity oil ask for ANSUL 300.)

# ANSUL CHEMICAL COMPANY

REFRIGERATION DIVISION, MARINETTE, WISCONSIN

ANSUL SULFUR DIOXIDE, ANSUL METHYL CHLORIDE, ANSUL OIL, KINETIC'S "FREONS"

# SCENES from the SHOW

... a photographic roundup of some of the personalities seen at the 6th All-Industry Show

Photos by Irving Alter, Harry Alter Co.



Left: Weldon Bishop, Washington, D. C.; Leonard Solomon, Mitchell Mfg. Co.; N. C. Giovanni, Eskimo Cooler Co., Chicago; and



E. A. Tracey, Mitchell Mfg. Co. Right: H. C. Frey, Freeport, Ill.; Joe Krall, Tyler Fixture Corp.; and Hy Ludacer, Freeport, Ill.



Left: Centered in this scene are Larry Larson, Tecumseh Products Co.; W. C. Conley, Jr., of Coolerator Co.; and Marc Shantz, Tecumseh representative in the central states



area. Center: Guy Henry, head of Henry Valve Co., explains a product feature to P. A. Van Zubin, Belvidere, Ill. Right: Albert



Wittlin, Roland Lacart, and Alvah Green, all of Allin Mfg. Co., with Michael Shola, Bridgeport, Conn., and Mrs. Shola.



Left: Joe Shannon and Ed Forster of Rome-Turney Radiator Co. pick up some pointers from George Allen of Superior Valve & Fittings Co. Center: W. P. Miller, Refrigeration



& Appliance Parts, Charleston, W. Va.; Ed Graff and M. S. Vidis of Ranco, Inc., are among those discernable in this scene. Right:



Paul Domke of Mueller Brass Co. smiles as the Glou Brothers, Jack and Ted, of Central Service Supply, take a welcome breather.



Left: Roland Compton, Decatur, Ala.; Del Moerich, of Automatic Products Co., and R. E. Peterson, Decatur, Ala. Center: Felix



Wierman, Richard Levine, and Russ Cook of Standard Refrigeration Co. in a huddle with B. J. Beaver (second from left), Philadelphia.



Right: Ruben Raskin of Dean Products, F. L. Zicarelli, of Jas. P. Marsh Corp., A. G. Diel, of Newark, Irwin Geiger, of Irvington, N. J.



Left: Ed Todd, advertising manager, and Charlie Benson, sales manager, Imperial Brass Mfg. Co. Right: John Gulick, Redmond



Distributors, Inc., New York City; Al Michal, Chicago.

## SCENES from the SHOW

... a photographic roundup of some of the personalities seen at the 6th All-Industry Show

Photos by Irving Alter, Harry Alter Co.



Left: Automatic Products men shown here are Bradley Carroll, Harry Youmans, Thomas Melville, John Hall, W. C. Bullis, and E. C.



Kaskenbar. Center: E. J. Grove, Alliance, Ohio; Frank Y. Carter, Thomas E. Nobes and G. Cage, of Detroit Lubricator Co. Right:



Stanley Solto, R. T. Abrell, and John Gulick, of Redmond Distributors, Inc., with Don Leslie and D. Robinson, of Torrington Mfg. Co.



Left: Joe Phillips, Keansburg, N. J.; Bernard Glasner, Chicago; Lester Woobly, Belmar, N. J.; Miles Jarrow, Jarrow Products; A. E. Doan, Thermal Products, Ltd., Toronto; R. Nosek, Jarrow Products; and Woody Wilson,



Bradford, Pa. Center: C. Haines, Penn Dairy, Lancaster, Pa.; L. H. Fritz, Sun Oil Co.; Mary Hutton; W. J. Coprock, Sun Oil; and E. S. Ross, Sun Oil. Right: N. C. Meyerson,



Philadelphia; S. C. Kauffman, Jr., Westfield, N. J.; James Emmett, Jr., Jas. P. Marsh Corp.; Harry Smith, Wayne, Mich.; and Ronald Johnson, Marsh Corp.



Left: Al Esberg, of Eston Chemicals, explains the new Charg-A-Can to R. J. Murray and Arthur Bourees, of Schenectady, N. Y. Center: Charles Brooks, Long Island



City, N. Y.; Bill Stark, Cutler-Hammer; F. A. Rigby, of Portland, Ore.; and Wallace Leffingwell, of Cutler-Hammer. Right: W. C.



Dever and Harold Palmer, of Virginia Smelting Co.; W. B. Buckle, Houston, Tex.; and Walter Dulkan, West Brunswick, N. J.

# SCENES from the SHOW

... a photographic roundup of some of the personalities seen at the 6th All-Industry Show

Photos by Irving Alter, Harry Alter Co.



Left: Meyer Axelrod, Continental Refrigeration, Chicago; and Lyman Betz, Betz Corp. Right: Al Haldemann and D. K. Foraker, Brunner Mfg. Co.; Jos. Campson, Parke-Davis

Co., Detroit; Steve Benn and R. Heitchue, Brunner; Bob Hirsch, Worthington; and John C. Waldi, Parke-Davis, Detroit.



Left: Gerald Gearon, department of boiler and refrigeration inspection, Chicago; John McCartin, Chicago; L. C. Kohlman, Chicago; and Harvey Miller, Chicago. Center: Bill

Rinelli, Ansul Chemical Co.; Milton Neil, Air Conditioning Institute, Detroit; Henry Gullatt, Ansul; and V. G. Moneen, Belleville, Ill. Right: James White, Brooklyn, N. Y.; John

Edward, Airvel Corp., New York City; Walter H. Steiner, Philco Distributors, New York City; and James Osomos, Airvel Corp., New York City.



Left: Vicky Ratcliffe, H. C. Dengee, and Bob Caplan, Wabash Mfg. Co., Chicago. Center: Murray Bergman, Wholesale Distributing

Corp., Jamaica, N. Y.; Louis Calderon, Lane Refrigeration, Island Park, N. Y.; and Dwight Orr, Chicago Seal Co. Right: Al Zumbrun

and J. Fleming of Brunner Mfg. Co., and Jeff Reid, of Des Moines, Iowa.



Left: W. L. Lynch, Ed Forester, and Joe Shannon, of Rome-Turney Radiator Co. Center: C. E. Whippes and C. M. Spielman, of Ranco, Inc.; George Gardner, of Schenectady,

N. Y.; C. P. Sherrer, Star Pump & Cooler Co., St. Louis; and M. S. Vidis and E. V. Dunbar, Ranco. Right: Earl McLean, Chi-

cago; Earl Ruth and John H. Raidl, of Black Sivals & Bryson, Inc.; and Myer Alexrod, Continental Refrigeration, Chicago.





## SCENES from the SHOW

*... a photographic roundup of  
some of the personalities seen  
at the 6th All-Industry Show*

Shown here are scenes from two of the luncheons held for wholesalers during Show week. Left, a table scene at the luncheon held by Commercial Refrigeration & Air Conditioning. Discernable are Gus Larson of Gustave A. Larson Co., Howard Hubbell of Brass & Copper Sales, Ken Smith of R. D.

Marshall & Co., Frank Pond of Refrigeration & Industrial Supply, Paul Shapiro of Superior Refrigeration Supply, and Charles Pose of the Capson Co. Right, Frank Pond talks to J. R. Tranter and Ed Thiele of Kold-Hold at the wholesaler luncheon given by that company.



Left: Harold Behm of Commercial Refrigeration & Air Conditioning, O. A. Larson, Allentown, Pa., wholesaler, and Jack Graves, Miami. Center: Bill Culver of Geo. Fischer

& Sons, Saginaw, and E. M. Gresham, Heat & Power Engineering Co., Toledo. Right: Jack Glou, Scranton, Pa.; Boyd Evans,

United Refrigeration Supply, Memphis; Ted Glou, Central Service Supply, Syracuse; Joe Mideke, Mideke Supply Co., Oklahoma City.



Left: Bob Gennett, Refrigeration Supplies Distributor, Birmingham; Merle Stutzman, Refrigeration Supplies Distributor, Los Angeles; and George Crow, Jr., United Refrigeration Supply, Memphis. Center: Canadian

guests Jack Ross, Thermal Controls Ltd., Montreal, and A. E. Doan, manager of Thermal Controls' Toronto branch. Right: J. H. Audley, Blodgett Supply, Burlington, Vt.;

Joe Simons, Joseph Simons Co., Hartford; Doug Marshall, R. D. Marshall & Co.; Vernon Littlefield, Joseph Simons Co.; and Jules Fajans, Aetna Supply, New York.



Left: Dale Thompson, Mideke Supply Co., and William G. Thomas, Roche & Hull, Baltimore. Center: Frank Langsenkamp, F. H.

Langsenkamp Co.; Jerry Cassady, manager of Langsenkamp's South Bend branch, and Paul Shapiro, Kansas City. Right: Ken

Smith, R. D. Marshall & Co., and Joe Novotny, Harry Alter Co.

# BETTER LUBRICATION ...BETTER BUSINESS

**Assure both  
with  
TEXACO  
CAPELLA OILS**

## **FREE Lubrication Guide**

Lists makes and types of compressors and refrigerants used in 63 electric refrigerating units and 31 air conditioning units. Shows recommended grade of *Texaco Capella Oil* for each. Use guide as wall chart, or bind into service manual.

**Better lubrication** because *Texaco Capella Oils* are thoroughly stable compressor lubricants that are moisture-free . . . non-reactive with refrigerants . . . extremely low in pour test . . . extremely high in resistance to gumming and sludging.

**Better business** because *Texaco Capella Oils* assure clean, trouble-free, economical compressor operation . . . satisfied customers . . . repeat orders for dealers, distributors and service engineers.

*Texaco Capella Oils* are approved and recommended by leading compressor manufacturers and you can get them in the proper viscosities for every type and size of compressor. They come in 1-quart, 1-gallon and 5-gallon containers, *sealed* to prevent contamination.

Order *Texaco Capella Oils* today. The Texas Company, 135 East 42nd Street, New York 17, N. Y.



**TEXACO Capella Oils**  
FOR ALL AIR CONDITIONING AND REFRIGERATING EQUIPMENT



TEXACO presents MILTON BERLE on television every Tuesday night. METROPOLITAN OPERA radio broadcasts every Saturday afternoon.

# THE PRACTICAL Refrigeration Applications MANUAL ... by Harold Smith

**T**HE Practical Refrigeration Applications Manual extends a helping hand to those refrigeration and air conditioning men who occasionally encounter field engineering problems too tough for them to handle. Space limitations make it impossible to give complete detailed information covering each step necessary for the installation or erection of refrigeration equipment, insulation or fixtures. It is necessary to assume that those readers who request assistance with their problems are familiar with these basic fundamentals. If they are not, it is suggested that they seek this advice from their sources of supply when purchasing the materials which they intend to use on the job. Most suppliers are equipped to furnish such information. Readers are urged to submit their problems to this department. Each letter of inquiry will be answered personally by the author. The most interesting ones will be published in these columns. All problems should be clearly and completely stated and addressed to: COMMERCIAL REFRIGERATION AND AIR CONDITIONING, Manual Dept., 1240 Ontario St., Cleveland 13, Ohio.

## PROBLEM

**W**E ARE planning to construct a zero temperature warehouse having approximately 5,000 square feet of space. We need advice as to the most economical type of building to construct, type of insulation to use and kind of refrigeration to use.

"We will greatly appreciate any advice you can give us along these lines. If you know of any bulletins available from private or public sources, we will greatly appreciate learning where we can get them."

## SOLUTION

**R**EGARDING the most economical type of building to construct for a 5000-sq. ft. zero temperature warehouse, if we assume that you mean most economical from a standpoint of initial cost, our opinion would be that wooden construction probably would be the lowest price construction you could use in South Carolina where you have large quantities of lumber available in the immediate area.

From the standpoint of low maintenance and depreciation, we would naturally favor concrete or brick with concrete floors and an approved fireproof roof. Such construction is fire,

vermin and termite proof, assuring long life with relatively little maintenance cost over the years.

The logical thing for you to do is to consult a reliable building contractor located in your area regarding the costs of construction using wood construction compared with brick or cement.

Insulation should be used in the floors, walls and ceilings of all rooms to be refrigerated. Any approved insulation material can be used, but certain types of insulation materials lend themselves to certain types of construction better than others.

For low temperature rooms, with temperatures from zero to -20F, we would recommend that you use 8 inches of cork board, or its equivalent in the floors and walls and not less than 6 inches of cork board, or its equivalent, in the ceilings. Great care must be used to see that the insulation is properly installed with an adequate bond against moisture.

It is always advisable to consult with the insulation suppliers for their recommended specifications for thickness of insulation to use and methods for properly bonding and installing their materials.

We would recommend that low pressure refrigeration equipment using Freon refrigerant be used for refrigeration.

In locker room, bulk storage room, and freezer room, a choice of evaporators are available—plate type evaporators, bare pipe coils or force draft units with an efficient type of defrosting arrangement. In chill room

and fresh meat aging or storage room with temperatures around 36 F, force draft units usually work quite satisfactory. However, fin coils with pans may also be used.

We recommend the use of at least three condensing units for the most simple type of installation and adjustment—one condensing unit for the locker and bulk storage room, one condensing unit for the freezer room, and one condensing unit for the chill room, aging room, and any other rooms where higher temperatures are to be used.

By using three condensing units you entirely eliminate the need for two-temperature control devices and complicated adjustment. Frequently the operating cost is somewhat reduced through the use of several condensing units each handling a specific part of the job. You also derive some protection should mechanical trouble develop, as emergency refrigeration could be supplied by the rooms remaining in operation.

From the standpoint of low initial cost, one condensing unit operating the entire job is the cheapest and can, with the proper controls, be made to operate very satisfactorily.

For floor plan layouts, specifications and recommended materials to be used in locker storage or zero temperature warehouses, we suggest that you write to the Frozen Food Locker Institute, Inc., 656 Insurance Bldg., Omaha 2, Nebr. This organization represents the manufacturers and suppliers of many materials used in low temperature warehouses and locker plants. They also publish a booklet entitled "Your Locker Plant" containing much valuable information regarding the construction and materials recommended for use in low temperature installations. You also may wish to write to the National Frozen Food Locker Association, Room 1018, 308 W. Washington Blvd., Chicago 6, Ill. This organization is composed entirely of locker plant operators.

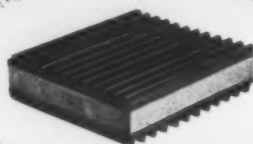
The National Association of Refrigerated Warehouses, 1005 E. St., N.W. Washington 4, D. C., whose membership consists of refrigerated warehouse operators throughout the United States, also might be able to supply you with some helpful information.

## NEW FLORIDA BUSINESS

A new business opened recently in Gulfport, Fla., is Moore's Refrigeration Service, 2731 Beach Blvd. Operated by George Moore, it will offer 24-hour commercial and household service to Gulfport and the Gulf Beaches.

**BUY FROM YOUR  
REFRIGERATION WHOLESALE**

## Control Vibration and Noise in Refrigerating and Air Conditioning Equipment



*With Efficient,*  
**Low-Cost, Easy-to-Install**  
**Korfund Elasto-Rib**

**Elasto-Rib** stops transmission of vibration and noise effectively, because it utilizes the elastic and damping properties of both cork and rubber.

Elasto-Rib has a core of high-grade cork plate, bonded between two layers of deep grooved, oil resistant synthetic rubber.

It is fast and easy to install. For most applications, no bolts, lag screws or cement are needed, and no drilling or other preparation of the floor is required. Simply place the Elasto-Rib under the equipment to be isolated, and the job is done! It can be cemented in place, if necessary, with a quick-acting high strength cement, which we supply.

Elasto-Rib is 1" thick, stocked in sheets up to 24" x 36", and is sawed or cut to size as needed. It has a loading range of 750 to 5,000 lbs. per square foot. A good average loading is 20 lbs. per square inch (3,000 lbs. per square foot), which makes it very inexpensive.

New, illustrated bulletin gives facts and figures you will find useful. Ask for ER-701, and free sample.



**THE KORFUND CO., INC.**

48-53-F 32nd Place  
Long Island City 1, N. Y.

Specialists in Vibration Control  
for Over 45 Years  
Representatives in Principal Cities

## BAKERY PROFITS . . .

*Continued from page 31*

galvanized metal finished in white enamel. Interior also is of galvanized metal, with one short shelf.

Since the bakery specializes in whipped cream products, Gulkin also asked the Behrens firm to build a refrigerated display case to match the blonde oak fixtures used elsewhere in the store. The result was a \$500 case which contains three levels of shelving and is refrigerated by a 3/4-hp Par condensing unit connected with an American Coil blower unit concealed in the top of the case.

Measuring 6 feet long and 5 feet high, this display case is fitted with double Thermopane glass. Interior of the case is lined with stainless steel. A cold cathode lamp provides illumination. The case is held at a temperature of 35 to 40 F for the storage and display of such products as eclairs, whipped cream pies, etc.

These three specially designed and custom constructed pieces of refrigeration equipment provide the bakery with approximately 400% more refrigerated space than was made available by the single reach-in refrigerator and walk-in box which they replaced—and the bakery traces much of its 300% sales increase in a single year to the installation of this conveniently located and adequately sized refrigerated storage and display space.

## COMMERCIAL SALES . . .

*Continued from page 38*

street, also a banquet speaker, discussed "The Importance of Statistics in Our Industry".

Tebeau maintained that "90% of good business judgment lies in being well informed". He cautioned his hearers that a "good year" for the industry doesn't necessarily mean good business for every individual in that industry, and pointed out that it is up to each individual dealer to do his utmost to make his own particular business a success.

He backed up this contention by citing statistics which showed that more refrigeration manufacturers went bankrupt in 1948—a record sales year for the industry as a whole—than in any other year back to 1941 when figures were first compiled.

A suggested program of activities for the coming year was presented by the Fernley organization and approved by the association.

This program calls for a series of studies to be made among association members on such subjects as overhead expense breakdown, methods of compensating salesmen, types of insurance carried, types of advertising utilized and the cost and effectiveness of each type, inventory control, group insurance, salesmen's reports, and sales training programs.

Results of these studies will be tabulated and the summarized information will be made available to all members.

The Fernley organization also announced its intention to strive on behalf of association members, for a reduction of overhead costs through increased efficiency, improved relations with sources of supply, the establishment of an interchange service for disposal of surplus supplies, the setting up of a collection bureau, and the circulation of information on new legislation and other matters of import to NCRSA members.

## JOINS MAINTAIN CO.

Herbert A. Philbrick has been appointed advertising and sales promotion manager of the Maintain Store Engineering Service, Boston, Mass., firm of store planning consultants and manufacturer of store equipment, according to an announcement by Russ Maintain, president.



Philbrick was formerly assistant advertising director of M & P Theatres (Paramount Pictures) in New England, and more recently assistant advertising director of American Theatre Corp.

**Fight**  
**Infantile**  
**Paralysis**

**JOIN**  
**THE MARCH OF**  
**DIMES**

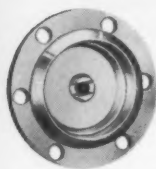
THE NATIONAL FOUNDATION FOR INFANTILE PARALYSIS



**High-efficiency Drying ! Faster Servicing ! Big Savings !**

-when you install the

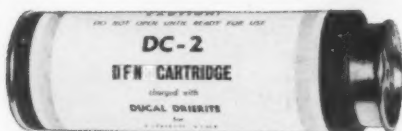
## *Improved* **DFN** **CARTRIDGE - TYPE DRIERS**



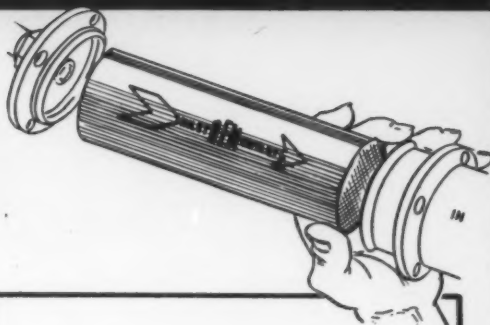
FLANGE



DEMOUNTABLE SHELL



REPLACEABLE CARTRIDGE AND HERMETIC CONTAINER



### **ADVANTAGES**

**Faster Servicing.** Once installed, the sturdy outer shell remains—only the cartridge is replaced for servicing.

**Low Cost Replacement.** Compare your present replacement costs with the new lower-priced DFN replaceable cartridges and see the substantial savings each time you service the drier.

**High-efficiency protection** against moisture, sediment and sludge. Cartridge contains drying agent, strainer and filter assembly, complete and ready to insert.

**Extra Uses.** Interchangeable cartridges available to meet unusual conditions—filters, strainers and a wide variety of desiccants.

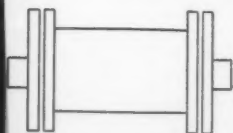
### **LATEST IMPROVEMENTS**

**in Demountable Shell.** Forged brass flanges with tapped ring. 6 silicon bronze bolts. All joints high temperature brazed.

**in Cartridge.** 2 bearing points assure perfect seal and easier removal. Filter cages rolled into shell. New hermetically sealed, moisture-proof, metal-end container maintains 100% drying efficiency until used.

DFN Cartridge Type Driers are available at your wholesaler, in capacities from 1 ton to 30 tons, with choice of Du-Cal, Silica Gel, Activated Alumina or Calcium Chloride.

### **LARGE-TONNAGE DRIERS**



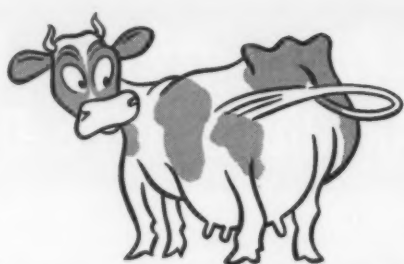
Capacities up to 100 tons from stock. Bulk-charged, all-steel driers, double flanged for easy re-charging. Write for Bulletin LD-2. Larger capacity driers made to order.

*Write for New D F N Catalog!*

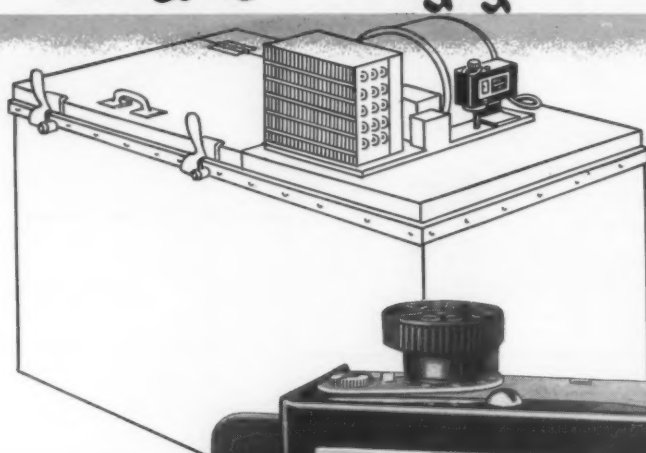
**McINTIRE CONNECTOR CO., 257 Jefferson St., Newark 5, N. J.**



**DRIERS** . . . all types and sizes, 1/6 hp. to 100 tons  
MOISTURE CONTROL UNIT      MOISTURE INDICATOR  
STRAINERS      FILTERS



"She's making  
sure it's kept  
correctly cooled  
with  
Ranco Controls"



## Ranco Type O-1414 Control for Milk Coolers

Rigid inspections and tests of all Ranco Controls, at the factory, insure accurate, positive operation under the most exacting conditions. You spend far less time . . . make greater profits on every replacement job when you replace it right with Ranco. Ask your Ranco wholesaler about the quality Ranco line — most complete line ever supplied to the trade!



**Ranco Inc.**

COLUMBUS 1, OHIO



### check with Ranco first

- specialists in refrigeration
- dependability
- greater customer satisfaction
- less stock to carry
- more profit to you

World's Largest Manufacturers of Refrigeration Controls . . . more than 20,000,000 controls now in use

## THE SERVICE MAN'S DEPARTMENT

# HERE'S HOW!

Edited by  
Warren W. Farr

### Why Not "Polish Up" Your Sales Technique?

One of the hottest promotional ideas we've heard about in a long time is one that's based on an extremely effective sales follow-up. Here's how it works:

About an hour after a piece of refrigeration equipment is delivered, one of this dealer's salesmen or servicemen calls on the customer and checks the door or lid seal, shelf fit, level, and so on—and then proceeds to polish the unit with the proper type of polish for that particular finish.

Of course while he's using the polish he's talking with the customer, explaining all the features of this new piece of equipment and mentioning the merits of the polish too. In his conversation he invariably inquires about the customer's plans for adding other items of refrigeration equipment in the future.

As a final gesture, the salesman gives the customer the bottle or can

*I do it  
this way...*

**G**LASS jars used in the workshop to hold small parts etc. can be easily and permanently labeled by writing the necessary information on the adhesive side of a strip of masking tape with a ball point pen and attaching this label to the inside of the jar.

Even if the parts are kept in the jar in oil, the label cannot become obscured and cannot get dirty. The only requirement is that the jar must be washed out thoroughly before the label is applied, or it will not stick.

J. D. Malan,  
Wahroonga, Australia

*I do it  
this way...*

**S**OME condensing units have the electric motor hold-down bolts located directly over the receiver. As a result, when a motor is removed for repairs these bolts can cause you plenty of grief when you try to get them back through the base of the unit and through the slots in the motor base. Because the receiver is in the way, you can't get your hand in place to put these bolts back in.

I have learned an easy way to handle this tough job. After the motor is removed, it is a simple matter to drop a string down through the holes in the base. Then slip the washer on the bolt and tie the string around the threads near the end of the bolt. The bolt can then be pulled into place with the string and another washed and put put on.

The final step is to take a hack saw and finish out the slot in the motor base so that the base can be slid in between the washer and the nut. This procedure in no way damages the motor, and it certainly makes a hard job easy.

N. House,  
Shreveport, La.

of polish to use at a later time.

The dealer's one-word report of the results of this ingenious (and inexpensive) promotion is—terrific!"

### Points on Installing Low Pressure Systems

7. *Final leak test* is advisable in order to again make certain that the entire system is free of refrigerant leaks, and particularly the connections used during the charging operation. A refrigerant leak could result in early and costly service adjustments, as well as user dissatisfaction

with the equipment and loss of confidence in the system as a whole, and the organization responsible for its sale and installation.

### Check-List for TXV Service

A quick check-list for reference in the servicing of thermostatic expansion valves has been issued by Sporlan Valve Co. This bulletin lists five principal problems which may arise in connection with these valves, and then proceeds to itemize the probable causes, as follows:

*If load temperature is too high or if valve does not appear to feed enough, the cause may be:*

1. Moisture, water, or mixture of water and oil frozen in valve port or in working parts of valve.
2. Strainer clogged with drier material, scale, or sand.
3. Improper valve adjustment.

*I do it  
this way...*

**O**N some refrigerators I have had trouble with moisture collecting on the thermostat where the wires are connected. This causes the unit to run continually.

To remedy this situation I now smear a thick coating of vaseline over the screws which hold the wires in place. When possible, in fact, I smear vaseline over the entire thermostat. This procedure has completely eliminated this particular type of moisture trouble.

Leon Mourar,  
Spring City, Pa.

(Editor's Note: When following this procedure be careful to keep the grease away from any of the rubber insulation, as it would be apt to have a deteriorating effect on the rubber.)

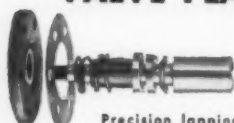
SPECIFY  
**DELAVAN**  
WHEN YOU NEED  
**VALVE PLATES**  
FOR  
**KELVINATOR**

WRITE FOR  
BIG, NEW CATALOG  
ON THE COMPLETE  
DELAVAN LINE

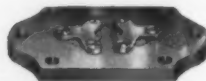
**DELAVAN**  
MANUFACTURING  
COMPANY  
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DES MOINES 13, IOWA

*Servicemen!*

FOR MAXIMUM  
EFFICIENCY  
USE  
**CHICAGO SEALS AND  
VALVE PLATES**



Precision lapping, superior construction and simple installation make Chicago seals ideal for replacement.



Only Chicago valve plates have replaceable seats. Replacements for over 340 compressor models.

**CHICAGO SEAL CO.**  
332 S. HOYNE AVE. CHICAGO 12, ILL.

4. Lack of refrigerant.
5. Improper bulb location.
6. Valve too small.
7. Gas in the liquid line.
8. Feed-back from another valve.
9. High pressure drop through evaporator.

10. Short-circuiting of evaporator.  
*If the valve cycles enough to cause reduced evaporator capacity, the cause may be:*

1. Valve too large.
2. Unfavorable bulb location.
3. Incorrect thermostatic charge.

*If valve feeds too much or if liquid returns to compressor, the cause may be:*

1. Moisture, water, or mixture of

**WANT TO EARN \$5?**



You don't have to be a writer or a literary genius! Just jot down some of the shortcuts you've developed in your maintenance or installation work and send them to **HERE'S HOW** EDITOR, COMMERCIAL REFRIGERATION AND AIR CONDITIONING. Your \$5 will be paid promptly when your maintenance tip is published in the magazine. Let's hear from you!

water and oil frozen in valve port or in working parts of valve.

2. Improper valve adjustment.
3. Improper contact between bulb and suction line.
4. Improper location of bulb.
5. Valve may be opening during the off cycle.
6. Valve may be leaking slightly and filling evaporator during off cycle.
7. Liquid may be draining into compressor crankcase during off cycle.
8. Liquid may be returning to compressor crankcase during off cycle through compressor discharge valves.

*If valve does not regulate at all,*

the cause may be:

1. External equalizer not connected, or line plugged with solder.
2. Valve body deformed.

*If suction pressure is too low or too high and the superheat is normal, the cause generally is:*

1. Improper balance between evaporator and condensing unit.

*I do it  
this way...*

**I** USE one-half of a 5-cent rubber ball as a container in which to mix litharge and glycerin. Any unused "dope" will harden in a short time and the rubber ball can then be cleared by merely squeezing it in your hand. This insures a clean container for subsequent mixing.

**Robert M. Lang,**  
Annapolis, Md.

**Question Corner**

**Question:** What percentage of capacity reduction would result from using a 5/8-inch suction line instead of a 1 1/8-inch suction line when the load is 1 1/2 tons and desired temperature is zero F, and the length of the suction line is 35 feet?

**Answer:** The capacity would be reduced by more than 50%, and on low-temperature applications the effect would be even worse. It should be noted that two 5/8-inch suction lines have considerably less suction volume area than one of 1 1/8 inches.

**CHANGES NAME**

York-Cleveland, Inc. is the new name of the Cleveland refrigeration and air conditioning contracting firm which formerly was known as Commercial Refrigeration, Inc. The firm, which handles York equipment, is still located at 1835 E. 24 St.

In its announcement of the name change, the company points out that while the switch became effective December 1 there has been no other change in the organization, which continues with the "same personnel, same products, and same desire to serve."

**BUY FROM YOUR  
REFRIGERATION WHOLESALER**



**HONEYWELL**

# Electronic Control



Just a simple  
coil of wire



THE MAGIC of electronics now brings a new type of automatic control 100 times more sensitive than existing controls for air conditioning installations. This new standard of precision control also brings extreme simplicity with added flexibility. The Honeywell Electronic thermostat is a simple coil of wire with no moving parts—nothing to wear out. But see how other factors are simplified! Basic circuits are the same for all types of applications. Fewer control units are needed. Single thermostats, for example, can be used for both heating and cooling with automatic change-over from one to the other at any selected temperature level.

It means a simple, practical answer for many problems to which, until now, there has been no clear-cut solution. So watch Honeywell Electronic Control carefully. It's opening the way for new horizons in the industry. Minneapolis-Honeywell, Minneapolis 8, Minnesota.  
In Canada: Leaside, Toronto 17, Ontario.



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**"V-METH-L"**  
Methyl Chloride

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DRY  
ESOTOO"**  
Liquid Sulfur Dioxide

**consistently pure  
consistently sure**



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*Refrigerants*

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Distributors for Kinetic's "Freon" Refrigerants

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**FOR BETTER PERFORMANCE**

*Install*



**DEPENDABLE**

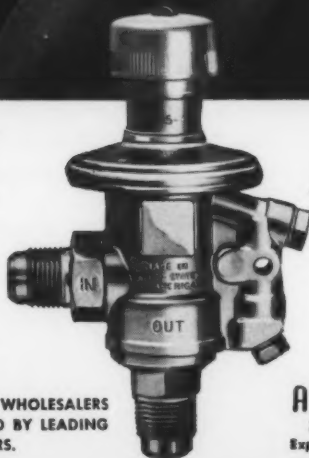
**REFRIGERATION VALVES**



**MODEL 235-S  
SUCTION PRESSURE  
REGULATING VALVE**

Indispensable on multiple-temperature systems, A-P Model 235-S Valve provides closer, more accurate control of evaporator pressures, especially where two or more evaporators must be operated at different temperatures. Easily and quickly adjusted to system (without waiting) by means of handy adjusting knob and visible scale on collar. Capacity, up to  $\frac{1}{2}$  ton Freon,  $\frac{3}{4}$  ton Methyl or Sulphur. Adjustable from 0" vacuum to 40 lbs. Write for bulletin M-111.

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EVERYWHERE . . . RECOMMENDED AND INSTALLED BY LEADING  
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# Cancer's danger signals

1. Any sore that does not heal
2. A lump or thickening in the breast or elsewhere
3. Unusual bleeding or discharge
4. Any change in a wart or mole
5. Persistent indigestion or difficulty in swallowing
6. Persistent hoarseness or cough
7. Any change in normal bowel habits

# Can be your safety signals

Cancer is curable if discovered early and treated properly

If any of these symptoms appear, see your doctor *at once*.

Write for the booklet about cancer. Just address your request to "CANCER".

AMERICAN CANCER SOCIETY, INC.



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